DOCUMENT RESUME

ED 061 091	SE 013 552
TITLE	Educational Research European Survey 1970, Volume 4, Austria, Federal Republic of Germany, Netherland, Turkey.
INSTITUTION	Council of Europe, Strasbourg (France). Documentation Center for Education in Europe.
PUB DATE	71
NOTE	272p.
EDRS PRICE	MF-$0.65 HC-$9.87
DESCRIPTORS	*Comparative Education; *Educational Research; Evaluation; *International Education; Policy; Psychology; Sociology; Surveys; Tests
IDENTIFIERS	*Council of Europe

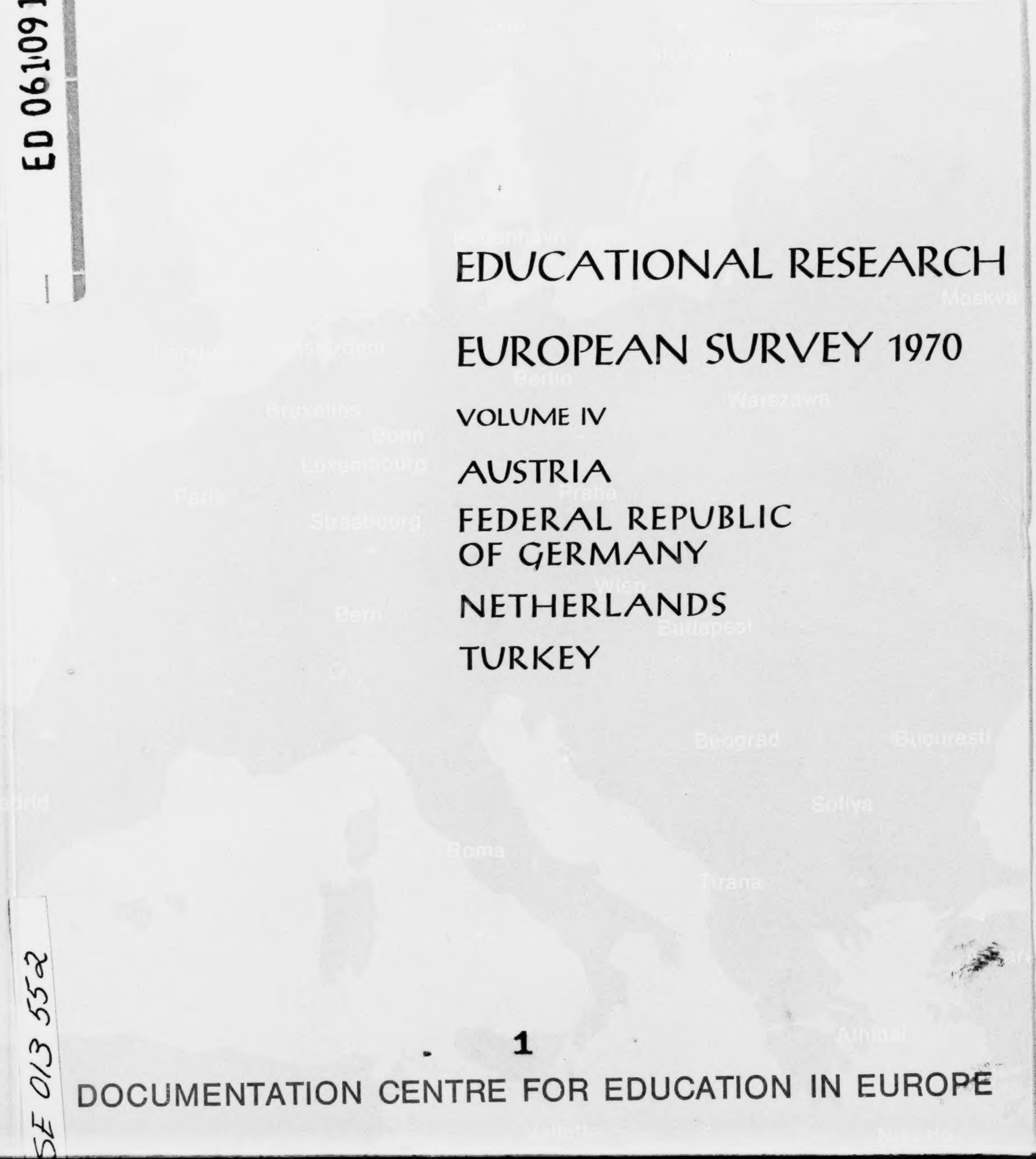
ABSTRACT

The answers to questionnaires sent to members of the Council of Europe to obtain details of Government policy on educational research, descriptions of the principal educational research organizations, and summaries of the major studies completed or in progress in 1970 are summarized in this compilation prepared by the Documentation Center for Education in Europe. The responses of Austria, the Federal Republic of Germany, the Netherlands, and Turkey are included in this volume. A summary of the educational research policy of each country is provided. Twenty-seven Austrian, nineteen German, forty Dutch, and seven Turkish educational research institutes are described, giving the official title, address, name of the director, a brief history, an outline of the administrative organization and program emphases, and a summary of the research projects undertaken, including the aims, methods, and where applicable, results to date. Projects described include studies of the teaching and assessment of most disciplines at all educational levels, as well as psychological and sociological studies related to education. (SE 013 232 is a related document. (AL)

ED 061091

COUNCIL OF EUROPE

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.


Moskva
Berlin
Warszawa
Bruxelles
Bonn
Luxembourg
Paris
Praha
Strasbourg
Wien
Bern
Budapest
Beograd
Bucuresti
Madrid
Sofiya
Roma
Tirana
Athinai

EDUCATIONAL RESEARCH

EUROPEAN SURVEY 1970

VOLUME IV

AUSTRIA
FEDERAL REPUBLIC OF GERMANY
NETHERLANDS
TURKEY

1

DOCUMENTATION CENTRE FOR EDUCATION IN EUROPE

SE 013 552

COUNCIL OF EUROPE

EDUCATIONAL RESEARCH
EUROPEAN SURVEY 1970

Volume IV

AUSTRIA
FEDERAL REPUBLIC OF GERMANY
NETHERLANDS
TURKEY

DOCUMENTATION CENTRE FOR EDUCATION IN EUROPE

Editor:
Director of Education
and of Cultural and Scientific Affairs
Council of Europe
STRASBOURG
1971

CONTENTS

Page

Introduction i

AUSTRIA

Educational Research Policy 1

Activities of Educational Research Organisations 3

I. University of Graz, Institute of Education 4

II. University of Graz, Institute of Psychology 5

III. University of Innsbruck, Institute of Education 9

IV. University of Social Science and Economics, Chair of Cybernetics and Cybernetic Education, Linz 10

V. University of Social Science and Economics, Institute of Psychology; Institute of Cybernetics and Cybernetic Pedagogics, Linz 12

VI. University of Social Science and Economics, Institute of Social Philosophy and General Sociology, Linz 12

VII. University of Social Science and Economics, First Institute of Sociology, Linz 13

VIII. University of Social Science and Economics, Second Institute of Sociology, Linz 13

IX. University of Salzburg, Institute of Legal and Political Philosophy and Political Science 14

X. University of Salzburg, Institute of Sociology and Civilisation 14

XI. University of Vienna, Institute of Education, Chair I for Theoretical Pedagogics 15

XII. University of Vienna, Institute of Education, Chair II for Applied Pedagogics - School Pedagogics 17

XIII. University of Vienna, Institute of Journalism and Media ... 18

XIV. University of Economics, Institute of Education in Economics, Vienna 19

XV. Austrian Academy of Arts and Sciences, Vienna 20

XVI. Federal Institute for Audio-Visual Media in Education, Vienna 21

XVII. Federal Institute of Educational Psychology, Graz 23

XVIII. Federal Institute of Vocational Education, Vienna 24

XIX. Federal Institute of Education for Styria, Graz 27

Page

XX. Federal Institute of Education for the Tyrol, Innsbruck ... 28

XXI. Federal Institute of Education for Upper Austria, Linz 28

XXII. Institute of Education for Carinthia, Klagenfurt 30

XXIII. Institute of Education of the Municipality of Vienna 30

XXIV. Institute for Research in Adult Education, Salzburg 32

XXV. Austrian Research Foundation for Development Aid, Vienna .. 34

XXVI. Institute for Technical Assistance Research, Vienna 35

XXVII. School of Music and Performing Arts, Institute of Sociology of Music and Research in Musical Education, Vienna 38

FEDERAL REPUBLIC OF GERMANY

Educational Research Policy 39

Activities of Educational Research Organisations 49

I. Education Centre, Berlin 50

II. Institute for Educational Research within the Max-Planck Society, Berlin 54

III. Special Research Sector for Educational Research at the University of Constance 59

IV. Institute for Labour Market and Vocational Research, Erlangen 64

V. German Institute for International Educational Research, Frankfurt/Main 68

VI. Pedagogical Institute of the German Association of Adult Education Centres, Frankfurt/Main 78

VII. Institute of Urban and Regional Educational Planning at the Technical University of Hanover 81

VIII. Working Group for Empirical Educational Research, Heidelberg 87

IX. Institute for Education in the Natural Sciences, Kiel 90

X. Bavarian Institute for Educational Planning and Research, Munich 94

XI. German Youth Institute, Munich 96

XII. German Institute for Scientific Pedagogy, Munster 101

XIII. German Institute for Education, Paderborn 104

XIV. German Institute for Remote Studies, Tübingen 106

XV. German Education Council, Bonn - Bad Godesberg 109

Page

XVI. German Research Association, Bonn - Bad Godesberg 112

XVII. Volkswagenwerk Foundation, Hanover 118

XVIII. School Building Institute of the Laender, Berlin 120

XIX. Central Archives for University Building, Stuttgart 125

NETHERLANDS

Educational Research Policy 135

Activities of Educational Research Organisations 139

I. Teacher Training Department of the Pedagogico-didactical Institute, University of Amsterdam 141

II. Department of Developmental Psychology, University of Amsterdam 142

III. Psychological Laboratory, Department for the Training of Adult Educators, University of Amsterdam 145

IV. Sociological Seminary, Faculty of Social Sciences, University of Amsterdam 146

V. Kohnstamm Institute for Educational Research, University of Amsterdam 147

VI. Psychological Research Laboratory, Free University, Amsterdam 150

VII. Laboratory for Psychodiagnostic and Industrial Psychological Research, Free University, Amsterdam 154

VIII. Department of Conflict Studies, Sub-Faculty of Psychology, Free University, Amsterdam ....

IX. Department of Research into Higher Education, Free University, Amsterdam 157

X. Institute of Education, State University of Groningen 159

XI. Institute of Special Education, State University of Groningen 161

XII. Pedagogical Institute, State University of Leyden 163

XIII. Institute of Psychology, State University of Leyden 166

XIV. Department of School Psychology, State University of Leyden 167

XV. Educational Research Centre, State University of Leyden ... 169

XVI. Institute of Education of the Sub-Faculty of Pedagogy, Catholic University of Nijmegen 173

XVII. Institute of Special Education, Catholic University of Nijmegen 176

Page

XVIII. Teacher Training Department of the Educational Institute, Catholic University of Nijmegen 178

XIX. Psychological Laboratory, Catholic University of Nijmegen 180

XX. Centre for Research into Higher Education, Catholic University of Nijmegen 182

XXI. Psychological Laboratory, State University of Utrecht 184

XXII. Institute of Clinical and Industrial Psychology, State University of Utrecht 187

XXIII. Educational Research and Development Section, State University of Utrecht 189

XXIV. Institute of Applied Linguistics, State University of Utrecht 190

XXV. Educational Research Working Group, Technological University of Delft 193

XXVI. Educational Research Group, Technological University of Eindhoven 196

XXVII. Centre for Educational Research and Development, Technological University of Twente 198

XXVIII. Netherlands Universities' Joint Social Research Centre, Amsterdam 201

XXIX. Central Planning Bureau, The Hague 205

XXX. Netherlands Central Bureau of Statistics, The Hague 211

XXXI. National Employment Service, Division for Vocational Guidance, Research Office, Leidschendam 214

XXXII. Municipal Institute for Educational Therapy, Amsterdam ... 216

XXXIII. Nijmegen Institute for Educational Research 219

XXXIV. Foundation Research Institute for Learning Difficulties, Utrecht 223

XXXV. Working Group Empirical Introduction, Amsterdam 225

XXXVI. Pedagogical Centre of the Municipality of Enschede 227

XXXVII. Foundation for Research on Children with Learning and Educational Difficulties, Groningen 230

XXXVIII. Protestant Pedagogical Study Centre, Hoevelaken 235

XXXIX. Foundation Working Group, Student Research, Rotterdam 236

XL. National Foundation of Schools for Young Workers 237

Page

TURKEY

Educational Research Policy 241

Activities of Educational Research Organisations 243

I. Ministry of Education Planning, Research and Co-ordination Office, Ankara 243

II. Department of Education, Middle East Technical University, Faculty of Arts and Sciences, Ankara 249

III. Department of Education, Institute of Social Sciences, Faculty of Social and Administrative Sciences, Hacettepe University 253

IV. Ministry of Education, Under-secretariat of Vocational and Technical Education, Study and Programming Office, Ankara . 256

V. State Planning Organisation, Ankara 260

VI. The Scientific and Technical Research Council of Turkey, Ankara 261

INTRODUCTION

The Council of Europe's ad hoc Committee for Educational Research, which was set up by the Council for Cultural Co-operation in 1968, has the task of promoting information on, co-ordination of, and co-operation in educational research at the European level.

Under the guidance of the Committee, the Documentation Centre for Education in Europe carries out and publishes European Surveys on Educational Research at two-year intervals. The First Survey was conducted in 1968 and published in 1969 (Council of Europe.- Educational Research, European Survey 1968.- Strasbourg, Documentation Centre for Education in Europe, 4 Vols., 1969). The Second Survey, carried out in 1970, is now presented.

The Surveys contain the replies received from member Governments of the Council for Cultural Co-operation to questionnaires drawn up by the Committee. The objective of the Surveys is to serve as an instrument for mutual information of Governments and researchers. The Surveys are intended to provide detailed yet concise information on the educational research policy of member Governments, on the main educational research organisations and on the major educational research projects reported or in progress in the country in the respective time period.

The questionnaire which underlies the Second Survey is basically identical to the questionnaire of the First Survey. This should facilitate comparison. However, in the questionnaire of the 1970 Survey, a section was added which asked for information on educational research projects carried out by research organisations other than those primarily concerned with educational research. Furthermore, in the light of experience gained from the First Survey, a number of questions were reformulated. The redrafting of the questionnaire was done by a working party which was set up at the 1969 meeting of the Committee and comprised experts from France, the Federal Republic of Germany, the Netherlands, Sweden and the United Kingdom.

The national contributions to the 1970 Survey have tended to be more comprehensive than those received in 1968. In some member States the number of educational research projects and of research organisations has considerably increased. The growing impact of research on educational practice and, at the same time, the difficulties engendered by accelerated educational growth, have led many member Governments to refine their policies for planning, co-ordinating and financing educational research. The Second Survey is therefore even more voluminous than the First. This certainly raises the question of how this method of collating and distributing information on educational research at the European level might be improved in future.

To speed up the process of publication, contributions have been offset printed in four volumes in the order and in the language in which they were received. Three contributions had, for technical reasons, to be presented as mimeographed documents and are distributed together with Volume IV. Following the Committee's advice, no attempt was made to translate the manuscripts into the other official language. This would at present have posed insurmountable difficulties to the Secretariat. An Index Volume, listing the names of the researchers mentioned in the Survey and containing key words for the retrieval of the projects described in English and French respectively, will be published at the end of the series.

The technical editing which in some cases involved a certain amount of linguistic revision, had, as previously, to be done by the Secretariat in addition to its normal duties. Any misinterpretation that may have arisen will, it is hoped, be met with indulgence.

The Secretariat is glad to report that some member Governments have used their contributions to this Survey as the basis for a national publication and that in a number of member States the procedure of replying to the questionnaire has led to the creation of permanent machinery for collating and disseminating educational research information. It can also be proved that the Surveys have assisted educational research organisations and individual researchers in establishing contacts and engaging in co-operation. The Secretariat hopes that the Surveys will make an impact on educational policy in Europe by convincing decision-makers that there is a growing pool of research potential at their disposal, in their own country and abroad, which can contribute to the formulation and solution of those problems to which research can offer an answer.

Niels BORCH-JACOBSEN
Director of Education and of
Cultural and Scientific Affairs

Strasbourg
December 1971

10

I. EDUCATIONAL RESEARCH POLICY

Agencies which promote educational research

The following list contains the names of official, semi-official and independent institutions (without any claim to completeness) engaged in educational research.

1. The Federal Ministry of Education and Arts;
2. The Federal Ministry of Science and Research;
3. *Österreichische Akademie der Wissenschaften, Kommission für Geschichte der Erziehung und des Unterrichts* (Austrian Academy of Arts and Sciences, Commission for History of Education);
4. The Universities and other institutions of higher learning, in particular the University Institutes of Education;
5. The *Pädagogische Institute* (Institutes of Education) in the Federal Provinces;
6. The *Berufspädagogische Institute* (Institutes of Vocational Education) of Vienna, Graz and Innsbruck.

Co-ordination

The co-ordination of educational research is in the hands of the Federal Ministries of Education and Arts and of Science and Research, with due consideration being paid to the principle of freedom of science and its teaching at the institutions of higher learning.

In the field of research concerning the history of education, certain co-ordinating functions are exercised by the Commission for History of Education of the *Österreichische Akademie der Wissenschaften* (Austrian Academy of Arts and Sciences).

Furthermore, direct contact is maintained between the individual Institutes of Education and of Vocational Education, their principals dealing from time to time with the co-ordination of research activities.

In addition, there is the *Institut für Bildungs- und Beratungsforschung* (Institute for Educational and Technical Assistance Research), an independent institution whose advisory board includes chair-holders of all Austrian institutions of higher learning.

Finance

Basically, the financing of research is the duty of the body that maintains the respective institution.

For this reason, the Federal Government, which maintains the institutions of higher learning 100 per cent and covers over 60 per cent of the cost of training teachers and educational assistants, also carries the main financial burden for educational research. Thus the educational budget includes separate items for the promotion of research, including the *Fonds zur Förderung der wissenschaftlichen Forschung* (Fund for the Promotion of Scientific Research). It also includes appropriations for the promotion of education and instruction, for empirical research in the field of education and for the research requirements of the Federal Institute of Educational Psychology.

Considerable amounts are also contributed by the Federal Provinces (including the Municipality of Vienna), which, for instance, carry joint financial responsibilities with the Federal Ministry of Education and Arts in the field of empirical educational research.

Finally, certain research projects are supported by private bodies.

Information and dissemination

Research projects in the field of empirical educational research are kept in evidence at the Federal Ministry of Education and Arts. The dissemination of information in the field of educational research, educational planning and educational policy is effected through the publication of pamphlets, most recently listed in Volume 10 (1966) of *Erziehung und Unterricht* (Education and Instruction), as well as a number of journals. Several journals are published by the Federal Ministry of Education and Arts, in particular the Official Bulletin of the Ministry (together with the Federal Ministry of Science and Research) with its supplement entitled *Pädagogische Mitteilungen* (Educational News-Sheets), the series *Erziehung - Wissenschaft - Forschung* (Education - Science - Research) and the educational journal *Die berufsbildende Schule Österreichs* (Technical and Vocational Education in Austria). The *Informationsdienst für Bildungspolitik und Forschung* (i b f; Information Service for Educational Policy and Research), Vienna, promoted by the Ministry, informs the public by means of daily, weekly and monthly publications, which are also sent to the entire Austrian press.

Trends and tasks

At present, educational research in the broadest sense serves the main purpose of contributing to the re-organisation of the Austrian educational system with all its social and economic ramifications. This re-organisation, as well as the broad and vital need to take account of the school population explosion and the interdependence between education and economic growth, have assigned new tasks to educational research. Emphasis is currently being given to the following areas:

- pre-primary education,
- didactics at the elementary level,
- objective evaluation of achievement,
- possibilities of programmed instruction,
- comprehensive vs traditional schools in the 10-14 age group,
- integration of audio-visual aids with other teaching methods.

The recently chartered *Hochschule für Bildungswissenschaften* (School of Education) at Klagenfurt is expected to provide a major impetus in the field of educational research.

II. ACTIVITIES OF EDUCATIONAL RESEARCH ORGANISATIONS

Information has been included on the research projects of the following organisations:

University of Graz

I. Institute of Education

II. Institute of Psychology

University of Innsbruck

III. Institute of Education

University of Social Science and Economics, Linz

IV. Chair of Cybernetics and Cybernetic Education

V. Institute of Psychology; Institute of Cybernetics and Cybernetic Pedagogics

VI. Institute of Social Philosophy and General Sociology

VII. First Institute of Sociology

VIII. Second Institute of Sociology

University of Salzburg

IX. Institute of Legal and Political Philosophy and Political Science

X. Institute of Sociology and Civilisation

University of Vienna

XI. Institute of Education, Chair I for Theoretical Pedagogics

XII. Institute of Education, Chair II for Applied Pedagogics - School Pedagogics

XIII. Institute of Journalism and Media

University of Economics, Vienna

XIV. Institute of Education in Economics

XV. Austrian Academy of Arts and Sciences, Vienna

XVI. Federal Institute for Audio-Visual Media in Education, Vienna

XVII. Federal Institute of Educational Psychology, Graz

XVIII. Federal Institute of Vocational Education, Vienna

XIX. Federal Institute of Education for Styria, Graz

XX. Federal Institute of Education for the Tyrol, Innsbruck

XXI. Federal Institute of Education for Upper Austria, Linz

XXII. Institute of Education for Carinthia, Klagenfurt

XXIII. Institute of Education of the Municipality of Vienna

XXIV. Institute for Research in Adult Education, Salzburg

XXV. Austrian Research Foundation for Development Aid, Vienna

XXVI. Institute for Technical Assistance Research, Vienna

XXVII. School of Music and Performing Arts, Institute of Sociology of Music and Research in Musical Education, Vienna

I. *Name of institute:* UNIVERSITÄT GRAZ, INSTITUT FÜR PÄDAGOGIK
(University of Graz, Institute of Education)

Address: Hans Sachsgasse 3/II, A-8010 Graz

Historical: Founded in 1964 in the Philosophical Faculty.

Staff: 10.

Budget: 1970 - A.S. 83,000.

MAJOR RESEARCH PROJECT IN PROGRESS

Social situation and educational opportunity of Styrian secondary school pupils

Researchers: A. EDER, H. WURZWALLNER

Starting date: 1968

Probable completion date: 1971

Purpose: To determine opportunities of Styrian secondary school pupils with respect to access, scholastic success and scholastic achievement.

Methods: Cohort analysis in the form of moving averages; statistical evaluation methods.

II. *Name of institute:* UNIVERSITÄT GRAZ, INSTITUT FÜR PSYCHOLOGIE
(University of Graz, Institute of Psychology)

Address: Schubertstrasse 6a/II, A-8010 Graz

MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

1. *Effects of studying in a foreign country on some aspects of personality and attitude*

Researcher: D. AFSCHANG

Time spent on project: 1967-70

Purpose: To assess changes in personality and attitude during Iranian students' study abroad.

Methods: Personality and intelligence tests; attitude questionnaire used on Iranian students both at home and abroad.

Conclusions: Independent of intelligence, Iranian students suffer from adaptation problems abroad, leading to higher incidence of neurotic, paranoid and depressive tendencies.

2. *Change of factorial structure during learning*

Researcher: W. BUTOLLO

Time spent on project: 1 year

Publication: *Psychologische Beiträge*, 1970, 12, 52-64

Purpose: To assess possible change in composition in multi-component achievement in cases of continued training.

Methods: Experimental, statistical.

Conclusions: No correlation between change of factorial structure and continued learning must be assumed.

3. *Effects of mnemonic aids on learning and retention of nouns*

Researchers: G. MIKULA, W. BAUER

Time spent on project: 6 months

Publication: *Bericht der 2. Tagung der Psychologen der Donauländer*, Bratislava, 1971

Purpose: To conduct basic research on the effectiveness of mnemonic aids for learning and retention.

Methods: Experimental.

Conclusions: Mnemonic aids are most effective when strength and relevance of association are high and when the aids are given both for learning and for remembering.

4. *Effects of changes in partial reinforcement on optimism*

Researchers: R. SKATSCHE, W. BUTOLLO

Time spent on project: 2 years

Purpose: Psycho-educational analysis of cognitive processes; applications in education.

Methods: Experimental.

Conclusions: Fictitious achievement feedback greatly influences the subjects' expectations of future achievement.

5. *Learning and activation with noise*

Researchers: H. FASCHINGBAUER, W. BUTOLLO

Time spent on project: 2 years

Purpose: Dependence analysis of learning with variously activating additional stimuli (noise).

Methods: Experimental.

Conclusions: Physiological activity (EEG) varies with additional stimuli and correlates with later reproductive achievement. Continuous levels of acoustical stimuli yielded better learning achievements than irregular ones.

6. *Information content of acoustically presented verbal stimuli and cortical arousal*

Researchers: W. BUTOLLO, R. PICHLER, R. LEGENSTEIN, H. MARSONER

Time spent on project: 1 year

Publication: *Bericht über den 27. Kongress der Deutschen Gesellschaft für Psychologie 1970 in Kiel*, Göttingen, 1971

Purpose: Research on fluctuations in activation (attention) in the perception of complex acoustical stimuli.

Methods: Experimental, EEG as a dependent variable.

Conclusions: There is a marked variation in EEG frequency with the information content of words aurally perceived, particularly for the bipolar biparietal derivation.

7. *Similarity context effects in retroaction*

Researchers: W. BUTOLLO, W. BEIN

Time spent on project: 1 year

Publication: *Bericht über den 27. Kongress der Deutschen Gesellschaft für Psychologie*, Hogrefe, 1971

Purpose: Basic research on the possibility of directly influencing learning phenomena by systematic additional stimuli.

Methods: Experimental.

Conclusions: Marked effects in both retroaction and proaction.

8. *Theoretical and practical development of an instrument for measuring reading comprehension*

Researchers: E. MITTENECKER, E. DeBOEUF, R. LEGENSTEIN

Time spent on project: 1963-70

Purpose: See title. Instrument based on information theory and applicable in a diagnostic test for access to various forms of secondary school (from age 17 years).

Methods: Experimental; methods of test theory and information theory.

9. *Errors in the solution of intelligence items as information on personality structure*

Researcher: H. EISENDLE

Time spent on project: 1968-70

Publication: The report of the project was published by the Institute in 1970.

Purpose: Applications to education and psychological diagnostics.

Methods: Experimental; random testing of pupils of a secondary technical school.

Conclusions: There is hope for a future use of specific solving attitudes in intelligence items for personality diagnosis.

10. *Development and first applications of a questionnaire concerning knowledge about pictorial art in secondary school pupils*

Researcher: E. RAAB

Time spent on project: 19 months

Publication: *Studien zur Wertungsforschung*, no. 5/1971, Graz

Purpose: To establish a questionnaire on knowledge of the history of art in the age bracket 16 to 21 years; applications in art education.

Methods: Questionnaire standardised on 148 pupils.

Conclusions: (provisional) There was a low correlation between knowledge of classical and modern painting, with females knowing more about classical and males more about modern painting.

MAJOR RESEARCH PROJECTS IN PROGRESS

1. *Changes in relative importance of different kinds of memory in the 10-14 age group*

Researchers: W. BUTOLLO, A. KEREIKU

Starting date: September 1970

Probable completion date: 1974

Purpose: Corroboration or refutation of the hypothesis that mechanical memory deteriorates between 10 and 14 years, while abstract memory improves.

Methods: Probabilistic measuring models.

2. *Development of learning abilities: biological basis for attention*

Researchers: W. BUTOLLO, E. MITTENECKER, R. PICHLER

Starting date: September 1970

Probable completion date: 1974

Purpose: To determine changes in attention in children and their effect on learning ability.

Methods: Longitudinal section. Dependent variables will be measures of behaviour as well as physiological indicators (recording by telemetry).

3. *Changes in the factorial structure of intelligence in adults*

Researchers: G. SABLATNÖG, W. BUTOLLO

Starting date: 1969

Probable completion date: 1971

Purpose: To determine which components of intelligence gain and lose in importance between the ages of 25 and 70 years.

Methods: Experimental, statistical.

4. *Associative symmetry and learning*

Researchers: A. KEREIKU, W. BUTOLLO

Starting date: May 1970

Probable completion date: Spring 1972

Purpose: Basic research on the stimulus-response definition of combinations of associative elements; their significance for learning theory.

Methods: Experimental, statistical.

III. *Name of institute:* UNIVERSITÄT INNSBRUCK, INSTITUT FÜR ERZIEHUNGSWISSENSCHAFT
(University of Innsbruck, Institute of Education)

Address: Innrain 30, A-6020 Innsbruck

Historical: The Institute was founded in 1960 within the Philosophical Faculty.

Staff: 6.

Budget: 1970 - A.S. 30,000.

MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

Motivation for achievement, value attitudes, educational guidelines, linguistic structures and social behaviour

Researchers: P. GSTETTNER, J. KLINGLER, H. SEIDL, P. SEIDL, F. SCHARTNER, G. SPORSCHILL, I. WIESER

Time spent on project: 18 months

Publication: The report of the project has been published by the Institute.

Purpose: Data for school reforms, particularly in rural areas; establishment of diagnostic models.

Methods: Tests and questionnaires on a sample of 750 city children and 750 rural children, their parents and teachers.

Conclusions: The school system should take certain learning and social conditions of rural children into account.

MAJOR RESEARCH PROJECT IN PROGRESS

School development in a rural area

Researchers: P. GSTETTNER, P. SEIDL, H.J. WALTER, R. WEISS, I. WIESER

Starting date: October 1970 (long-term project)

Purpose: To study the introduction of a differentiated comprehensive school system in a poorly accessible area.

Methods: Analysis of social areas, establishment of curricula and teaching aids.

IV. *Name of institute:* HOCHSCHULE FÜR SOZIAL- UND WIRTSCHAFTSWISSENSCHAFTEN, LEHRKANZEL FÜR KYBERNETIK UND KYBERNETISCHE PÄDAGOGIK (University of Social Science and Economics, Chair of Cybernetics and Cybernetic Education)

Address: A-4045, Linz

Historical: Founded in 1969 in the Technical-Scientific Faculty.

Staff: 9.

Budget: 1970 - A.S. 54,000.

MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

Algorithm for the optimal distribution of concepts in a teaching programme

Responsible researcher: M. LÁNSKY

Number of research workers engaged in project: 5

Time spent on project: Approximately 1,000 hours

Publication: Rolett-Weltner, ed. *Perspektiven des programmierten Unterrichts*, pp. 66-77, Vienna 1970.

Purpose: Computer-assisted aid for teaching programmers.

Methods: A mathematical model of learning and forgetting was developed and programmed for a computer to permit direct dialogue of the teaching programme with the computer.

Conclusions: "VERBAL" software is already being used in courses of educational programming.

MAJOR RESEARCH PROJECT IN PROGRESS

Cybernetic teaching and learning models for groups

Responsible researchers: N. SCHARMANN, M. LÁNSKY

Number of research workers engaged in project: 17

Starting date: January 1969

Probable completion date: December 1971

Purpose: Corroboration or rejection of the hypothesis that group instruction controlled by automatic machines is more efficient than comparable individual instruction.

Methods: Elaboration of the cybernetic model; elaboration of evaluation system and its programming for the computer; design of the teaching machine to be used.

V. *Name of institute:* HOCHSCHULE FÜR SOZIAL- UND WIRTSCHAFTSWISSENSCHAFTEN, INSTITUT FÜR PSYCHOLOGIE; INSTITUT FÜR KYBERNETIK UND KYBERNETISCHE PÄDAGOGIK
(University of Social Science and Economics, Institute of Psychology; Institute of Cybernetics and Cybernetic Pedagogics)

Address: A-4045 Linz

Directors: Professor Dr. Th. Scharmann
Professor Dr. M. Lánsky

MAJOR RESEARCH PROJECT IN PROGRESS

Lehr- und Lernmodelle für Gruppen (Models for teaching and learning in small groups)

Responsible researchers: Th. SCHARMANN, M. LÁNSKY

Number of research workers engaged in project: 9

Starting date: January 1970

Probable completion date: December 1971

Purpose: To compare the efficiency of individualised programmed instruction and group programmed instruction taking into consideration motivational aspects.

Methods: Parallel development of hardware and software for instructional programmes for individual and small group teaching. - Verification and validation from the cybernetic and socio-psychological point of view. - Further development of hardware and software on the basis of the findings.

VI. *Name of institute:* HOCHSCHULE FÜR SOZIAL- UND WIRTSCHAFTSWISSENSCHAFTEN, INSTITUT FÜR SOZIALPHILOSOPHIE UND ALLGEMEINE SOZIOLOGIE
(University of Social Science and Economics, Institute of Social Philosophy and General Sociology)

Address: A-4045, Linz

MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

Saving for future education

Responsible researchers: J. WÖSSNER, R. WENZEL

Number of research workers engaged in project: 7

Time spent on project: 1 year

Purpose: To determine barriers to education in the field of information and financing.

Methods: Questionnaires.

Conclusions: High motivation for education; many plans for saving towards education.

VII. *Name of institute:* HOCHSCHULE FÜR SOZIAL- UND WIRTSCHAFTSWISSENSCHAFTEN, I. INSTITUT FÜR SOZIOLOGIE (University of Social Science and Economics, First Institute of Sociology)

Address: A-4045, Linz

MAJOR RESEARCH PROJECT IN PROGRESS

Occupational choice and occupational attitudes of juveniles

Researchers: F. FÜRSTENBERG, K. MAYER

Starting date: October 1970

Probable completion date: 1971-72

Purpose: Publication of relevant data.

Methods: Questionnaires for pupils and students.

VIII. *Name of institute:* HOCHSCHULE FÜR SOZIAL- UND WIRTSCHAFTSWISSENSCHAFTEN, II. INSTITUT FÜR SOZIOLOGIE (University of Social Science and Economics, Second Institute of Sociology)

Address: A-4045 Linz

MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

Effects of the foundation of the School of Social Science and Economics at Linz

Researchers: E. BODZENTA, I. SPEISER, L. VASKOVICS, K. ZAPOTOCZKY

Time spent on project: 1 year

Publication: Mimeographed by the Institute in 4 volumes

Purpose: To assess the effects of the foundation of an institution of higher learning.

Methods: Evaluation of statistical data, oral interviews of a random sample of students, letters to dropouts.

Conclusions: The new School is of mostly regional importance. Certain fields of study at other institutions of higher learning are affected.

IX. *Name of institute:* UNIVERSITÄT SALZBURG, INSTITUT FÜR RECHTS- UND STAATSPHILOSOPHIE UND POLITISCHE WISSENSCHAFT
(University of Salzburg, Institute of Legal and Political Philosophy and Political Science)

Address: Franziskanergasse 2, A-5020 Salzburg

MAJOR RESEARCH PROJECT IN PROGRESS

Political and civic education in Austria

Responsible researcher: B. WICHA

Number of research workers engaged in project: 8

Starting date: October 1970

Probable completion date: Summer 1972

Purpose: Fact-finding and comparison with situation abroad; finding means to ensure maximum efficiency in civic instruction.

Methods: Questionnaires, interviews, tests.

X. *Name of institute:* UNIVERSITÄT SALZBURG, INSTITUT FÜR SOZIOLOGIE UND KULTURWISSENSCHAFT
(University of Salzburg, Institute of Sociology and Civilisation)

Address: A-5020, Salzburg

MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

1. *Preliminaries for educational planning, as illustrated by a municipal unit*

Researchers: M. RASSEM, J. WERNDL, S. PAUL, J. STAGL

Time spent on project: 1 year

Purpose: To assess the possibilities of improved adult education by improved organisation.

Methods: Polls (quota method), oral questioning of key personalities.

Conclusions: Improvement through organisation cannot be expected. A change in attitudes is required.

2. *Adult education in a rural community*

Responsible researchers: S. PAUL, J. STAGL

Time spent on project: 6 months

Purpose: To assess the possibilities of improved adult education by improved organisation.

Methods: Polls (quota method), oral questioning of key personalities.

Conclusions: Poorly integrated community; pronounced group stereotypes; apathy.

XI. *Name of institute:* UNIVERSITÄT WIEN, INSTITUT FÜR PÄDAGOGIK, LEHRKANZEL I FÜR THEORETISCHE PÄDAGOGIK
(University of Vienna, Institute of Education, Chair I for Theoretical Pedagogics)

Address: Universitätsstrasse 7, A-1010 Vienna

Historical: Founded in 1877 within the Philosophical Faculty; subdivision into two chairs in 1965.

Staff: 10.

Budget: 1970 - A.S. 59,000.

MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

1. *Case study of a television course on economics*

   Researcher: H.J. IPFLING

   Time spent on project: 1 year

   Purpose: To develop test questions for a TV course, with a concurrent theoretical assessment.

   Methods: See above.

   Conclusions: The test, as constructed, is in actual use.

2. *Problems of development aid in the school curriculum*

   Responsible researcher: M. HEITGER

   Number of research workers engaged in project: 6.

   Time spent on project: 1969-70

   Purpose: To assess the contribution of curricula and textbooks to increasing consciousness of development aid.

   Methods: Scanning of documents, interviews.

   Conclusions: Development aid might be treated in much more detail in Austrian schools.

MAJOR RESEARCH PROJECT IN PROGRESS

On maturity

Researcher: M. HEITGER

Starting date: Autumn 1969

Probable completion date: 1972

Purpose: To establish a plan for suitable graduation from secondary school and transfer to university.

Methods: Empirical.

XII. *Name of institute:* UNIVERSITÄT WIEN, INSTITUT FÜR PÄDAGOGIK, LEHRKANZAL II FÜR ANGEWANDTE PÄDAGOGIK - SCHULPÄDAGOGIK (University of Vienna, Institute of Education, Chair II for Applied Pedagogics - School Pedagogics)

Address: Universitätsstrasse 7, A 1010 Vienna

Historical: Founded in 1877; subdivision of the Institute into two chairs in 1965.

Staff: 9.

Budget: 1970 - A.S. 59,000.

MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

1. *Ageing memory*

Researcher: R. OLECHOWSKI

Time spent on project: Approximately 3 years

Publication: The report of the project has been published by Hans Huber-Verlag, Bern-Stuttgart-Vienna, 1969.

Purpose: To assess changes in learning achievement and learning motivation in adults.

Methods: Experimental.

Conclusions: Lifelong education may forestall detrimental effects (theory of hypertrophy by activity).

2. *The language laboratory*

Researcher: R. OLECHOWSKI

Time spent on project: Approximately 2 years

Publication: The report of the project has been published by Herder-Verlag, Vienna-Fribourg-Bâle, 1970

Purpose: To compare the efficiency of language-laboratory instruction vs conventional instruction.

Methods: Experimental (13-year-olds and adults).

Conclusions: There was a marked improvement of achievement with language laboratory. Advantages of the audio-active-compare (AAC) laboratory are particularly marked in adults.

MAJOR RESEARCH PROJECT IN PROGRESS

Motives determining curriculum choice

Responsible researcher: J. THONHAUSER

Number of research workers engaged in project: 3

Starting date: Summer 1970

Probable completion date: 1971

Purpose: To assess the influences determining the choice of type of school for individual pupils.

Methods: Empirical (52 schools, 102 classes involved).

XIII. *Name of institute:* UNIVERSITÄT WIEN, INSTITUT FÜR PUBLIZISTIK (University of Vienna, Institute of Journalism and Media)

Address: Universitätstrasse 7, A-1010 Vienna

MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

1. *Educational television abroad*

Responsible researcher: K. PAUPIÉ

Number of research workers engaged in project: 22

Time spent on project: 1,300 hours

Purpose: To aid in the development of Austrian educational television.

Methods: Utilisation of relevant publications; questionnaires to foreign agencies.

Conclusions: Few educational television programmes are broad-based successes. A replacement of conventional instruction seems improbable. Cassette TV undoubtedly has a bright future.

2. *Educational television in educationally backward areas*

Responsible researcher: K. PAUPIÉ

Number of research workers engaged in project: 26.

Time spent on project: Approximately 1,000 hours

Purpose: Contribution towards educational TV programming in Austria.

Methods: Case study, poll (standardised personal interview).

Conclusions: Very low viewer participation due to underlying attitudes.

3. *"Functional education" with special regard to television*

Responsible researcher: K. PAUPIÉ

Number of research workers engaged in project: 8

Time spent on project: Approximately 500 hours

Purpose: To assess the degree of problem-posing, of individualisation or adaptation, of stereotyping of socially controversial matters in current television programmes.

Methods: Qualitative contents analysis.

Conclusions: In general, information is telecast in a neutral way, with a tangible trend towards stereotypes and a less marked tendency to problematise.

XIV. *Name of institute:* HOCHSCHULE FÜR WELTHANDEL, INSTITUT FÜR WIRTSCHAFTSPÄDAGOGIK
(University of Economics, Institute of Education in Economics)

Address: Franz Klein-Gasse 1, A-1190, Vienna

Historical: Founded in 1898.

Staff: 9.

Budget: 1970 - A.S. 62,000.

MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

Programmed instruction in business education

Responsible researcher: W. SCHNEIDER

Number of research workers engaged in project: 11

Time spent on project: 2 years

Purpose: To determine the applicability of programmed instruction to the field of economics.

Methods: Assessment of aims of instruction, empirical assessment of actual situation by a kind of multi-snapshot procedure; checks on the effectiveness of programmed instruction by informal tests and questionnaires.

Conclusions: Since programmed instruction requires considerable investment, intensive curriculum and syllabus research and the development of efficient integration models are needed.

MAJOR RESEARCH PROJECTS IN PROGRESS

1. *Teaching at universities by programmed instruction and individual tutoring of students by computer*

Researcher: W. SCHNEIDER

Starting date: 1970

Probable completion date: 1972

Purpose: To assess the effectiveness of the methods described.

Methods: Experimental.

2. *Case-method, role playing and management games at secondary vocational schools*

Researcher: W. SCHNEIDER

Starting date: 1970

Probable completion date: 1972

Purpose: To assess the effectiveness of the methods described.

Methods: Experimental.

XV. *Name of institute:* ÖSTERREICHISCHE AKADEMIE DER WISSENSCHAFTEN
(Austrian Academy of Arts and Sciences)

Address: Dr. Ignaz Seipel-Platz 2, A-1010 Vienna

Historical: Founded in 1936.

MAIN RESEARCH ACTIVITY

The history of education; monographs of famous educators

Researchers: E. WINTER, P. FUNK, J. BERG, K. NAWRATIL, M. WINTER, E. LESKY, H. RAZINGER, F. KAINZ

XVI. *Name of institute:* BUNDESSTAATLICHE HAUPTSTELLE FÜR LICHTBILD UND BILDUNGSFILM
(Federal Institute for Audio-Visual Media in Education)

Address: Sensengasse 3, A-1090 Vienna

Director: Dr. Franz Hubalek

Historical: The Institute was founded in 1945 through the initiative of Hofrat Prof. Dr. Adolf Hübl, the Austrian audio-visual media pioneer. Preceding institutions: 1926 Schulkinobund Vrania, later Staatliche Filmhauptstelle and Österreichischer Lichtbild- und Filmdienst. The present institution arose from the need to develop audio-visual media in education.

Status and programme: The Institute is directly subordinate to the Austrian Federal Ministry of Education and Arts and is a member of the International Council for Educational Media (ICEM).

The Institute has two departments:

- Audio-visual media department,
- Department for scientific films.

The Institute conducts obligatory and voluntary courses for teachers which last from one day to one week. The courses deal with audio-visual techniques and methodology. Meetings and seminars deal with specific and general themes and problems (in publication, documentation, evaluation).

The Institute aims to promote optimal use of audio-visual software and hardware. Research work into the efficiency of audio-visual media at various school levels is carried out.

Staff: 23 (full-time).

Budget: 1968 - A.S. 8,250
1969 - A.S. 8,644
1970 - A.S. 9,660

MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

Contests for teachers concerning the use of audio-visual media in education

Responsible researcher: H. WEINER

Number of research workers engaged in project: 9

Purpose: Research into the use of audio-visual media in education.

Conclusions: The contests led to more than one hundred contributions from teachers of various school types. The ideal use of audio-visual media in all subjects was shown.

MAJOR RESEARCH PROJECTS IN PROGRESS

1. *ICEM-UNESCO, case study concerning the supply, organisation and use of audio-visual media in four primary schools (Austria, England, France, Holland)*

Researcher: H. WEINER

Starting date: Spring 1970

Probable completion date: Summer 1971

Methods: Within the scope of a UNESCO research project, two Austrian elementary schools were presented with a questionnaire regarding their respective educational methods. The 40 page questionnaire is concerned with

2. *Research regarding the effectiveness of single concept films*

Researchers: H. LING, J. SCHÜTZ

Starting date: Autumn 1970

Probable completion date: Autumn 1971

Methods: Short educational films on physics are shown to the pupils of several secondary schools. After viewing these films, the pupils are given a questionnaire to determine how much they have retained. Thus, a comparison between various methods of instruction and the single concept film is made possible.

XVII. *Name of institute:* PÄDAGOGISCH-PSYCHOLOGISCHES INSTITUT DES BUNDES
(Federal Institute of Educational Psychology)

Address: Hans Sachsgasse 14, A-8020 Graz

Historical: Founded under the Federal Ministry of Education and Arts, 1968.

Staff: 6.

Annual budget: A.S. 100,000.

MAJOR RESEARCH PROJECTS IN PROGRESS

1. *Validation of certain psychological, sociological and scholastic variables as predictors of university success or failure*

Researcher: G. PETRI

Starting date: 1968

Probable completion date: 1972

Purpose: To obtain a basis for further development of student counselling; to obtain information on didactics and curriculum organisation.

Methods: Achievement tests, interest tests, personality tests, use of school marks and data from Austrian university statistics.

2. *Factors in choosing a career and a course of studies, including the "image" of certain study fields*

Researchers: G. PETRI, H. SEIDL

Starting date: 1968

Probable completion date: 1972

Purpose: To obtain a basis for counselling secondary school graduates, in particular for controlling access to the various university curricula corresponding to the requirement for graduates; to awaken students' interest in the teaching and scientific professions.

Methods: Questionnaires, psychological tests.

3. *The problem of transfer from elementary to secondary education*

Responsible researchers: G. PETRI, A. ZRZAVY

Number of research workers engaged in project: Approximately 30

Starting date: 1968

Probable completion date: 1974

Purpose: To obtain information on: pupil counselling in the fourth grade; better adaptation of secondary school instruction to the pupil's individuality.

Methods: Psychological methods of constructing and validating ability and achievement tests; analysis of discrepancies between ability and achievement.

4. *Comparison of results of aptitude tests for admission to secondary vocational schools and achievement in eighth grade vs achievement in technical and vocational schools*

Researchers: G. PETRI, M. SONNLEITNER, R. STRECHA, A. ZRZAVY

Starting date: 1968

Probable completion date: 1972

Purpose: To diminish the attrition rate in secondary vocational schools; to improve pupil counselling in the eighth grade.

Methods: Validation of prediction variables (tests, school marks); examination of discrepancies.

5. *Development and evaluation of materials for achievement testing in English and mathematics*

Responsible researcher: G. PETRI

Number of research workers engaged in project: 5

Starting date: 1968

Purpose: Utilisation of the diagnostic, instructive and motivating functions of achievement testing for the advancement of individualised teaching.

Methods: Psychological procedures of test construction and evaluation of teaching feedback.

XVIII. *Name of institute:* BERUFSPÄDAGOGISCHES INSTITUT DES BUNDES IN WIEN
(Federal Institute of Vocational Education, Vienna)

Address: Neustiftgasse 95-99, A-1070 Vienna

Historical: Founded in 1966 under the Federal Ministry of Education.

Staff: 11.

Budget: 1970 - A.S. 3.3 million.

MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

1. *History, basic philosophy and current trends of vocational education*

Researcher: J. THONHAUSER

Time spent on project: 14 months

Purpose: A general review of the subject.

Methods: Critical processing of relevant literature.

Conclusions: Many current problems in vocational education have historical roots.

2. *Later use of foreign languages by graduates of secondary technical schools*

Researcher: R. KIRK

Time spent on project: 4 months

Purpose: To obtain a basis for curriculum and syllabus reform.

Methods: Questionnaires.

Conclusions: Knowledge of foreign languages is of major importance for these graduates in their professional lives.

3. *Physical and mental stress due to classwork experienced by pupils of secondary technical and vocational schools*

Researchers: R. KIRK, L. BUDZIKIEWICZ

Time spent on project: 2 years

Purpose: To obtain a basis for curriculum reform.

Methods: Questionnaires.

Conclusions: Curriculum reform is urgently needed because of major stresses.

MAJOR RESEARCH PROJECTS IN PROGRESS

1. *Motives behind the choice of a given type of school*

   Responsible researcher: J. THONHAUSER

   Number of research workers engaged in project: 3

   Starting date: May 1970

   Probable completion date: late 1971

   Purpose: See title.

   Methods: Empirical, statistical.

2. *Effective use of audio-visual aids in commercial education*

   Researcher: R. KIRK

   Starting date: November 1970

   Probable completion date: Late 1971

   Purpose: See title.

   Methods: Interviews, testing of published procedures.

3. *Commercial education and commercial practice*

   Responsible researcher: R. KIRK

   Number of research workers engaged in project: 6

   Starting date: 1970

   Probable completion date: 1972

   Purpose: To obtain basic information for curriculum and syllabus reform.

   Methods: Questionnaires, interviews, job analysis.

4. *Jobs taken by graduates of domestic-science schools*

   Researcher: L. BUDZIKIEWICZ

   Starting date: November 1970

   Probable completion date: Late 1971

   Purpose: To obtain data for curriculum reform and creation of new schools.

   Methods: Questionnaires, interviews, statistics.

XIX. *Name of institute:* PÄDAGOGISCHES INSTITUT DES BUNDES IN STEIERMARK
(Federal Institute of Education for Styria)

Address: Hasnerplatz 11, A-8010 Graz

Historical: Founded in 1947 under the Federal Ministry of Education.

Staff: 3.

Budget: 1970 - A.S. 375,000.

MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

1. *Streaming in grades 1 and 2* (grades 3 and 4 in progress)

Responsible researchers: F. WOLF, G. SCHOBER

Number of research workers engaged in project: 510 teachers and students of education

Time spent on project: 3 years (+ 18 months for grades 3 and 4)

Publication: *Unser Weg* 10/1967, 10/1968

Purpose: Assessment of experiment, particularly of minimum requirements.

Methods: Experimental.

Conclusions: Four out of five streams should lay down certain minimum requirements for promotion.

2. *Poll of parents' opinion on sex education at school*

Researcher: K. HAAS

Time spent on project: 6 months

Publications: *Kleine Zeitung* 128/1970 (7 June 1970), *Werkblätter der Gemeinschaft katholischer Erzieher in Steiermark* (October 1970)

Purpose: To obtain information for syllabus planning.

Methods: See title.

Conclusions: 75% of parents are in favour of sex education at school, if given by competent instructors and if parents are informed in advance of the contents.

XX. *Name of institute:* PÄDAGOGISCHES INSTITUT DES BUNDES FÜR TIROL
(Federal Institute of Education for the Tyrol)

Address: Brixnerstrasse 1, A-6020 Innsbruck

Historical: Founded in 1951 under the Federal Ministry of Education.

Staff: 2.

Budget: 1970 - A.S. 400,000.

MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

Standardisation of teaching aids and tests

Researchers: N. PRANTL, F. WEYERMÜLLER

Time spent on project: 2 years

Publication: The report of the project has been published by Verlag Eugen Ketterl, Vienna

Purpose: To increase objectiveness of achievement evaluation.

Methods: Standardisation.

XXI. *Name of institute:* PÄDAGOGISCHES INSTITUT DES BUNDES FÜR OBERÖSTERREICH
(Federal Institute of Education for Upper Austria)

Address: Südtiroler Strasse 13-15, A-4020 Linz

Historical: Founded in 1962 under the Federal Ministry of Education.

Staff: 3.

Budget: 1970 - A.S. 606,000.

MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

A socio-psychological examination of students of education in Upper Austria

Researcher: R. WEISS

Time spent on project: 4 years

Purpose: Survey of structure of students of education in order to assess effects of changes in teacher training.

Methods: Questionnaires, intelligence tests (486 subjects).

Conclusions: A detailed structure of the body of future teachers was produced.

MAJOR RESEARCH PROJECTS IN PROGRESS

1. *Programmed instruction in spelling, arithmetic and geometry*

Researcher: H. SEEL

Starting date: 1968

Probable completion date: 1971

Purpose: Assessment of programmes currently in use.

Methods: Experimental.

2. *Types of school vs intelligence*

Researcher: R. WEISS

Starting date: 1964

Probable completion date: 1971

Publications: Weiss, R. *Schulleistung und Intelligenz*
Sperrer, E. *Schultypen und Milieu*

Purpose: See title.

Methods: Questionnaires, tests (approximately 4,000 subjects).

3. *Teacher recruitment, teacher shortage, teacher training*

Researcher: R. WEISS

Starting date: 1964

Probable completion date: 1971

Purpose: To find barriers (and remedies against them) to the choice of the teaching profession by young people.

Methods: Questioning of approximately 500 students of education.

XXII. *Name of institute:* PÄDAGOGISCHES INSTITUT FÜR KÄRNTEN (Institute of Education for Carinthia)

Address: Paradeisergasse 7, A-9020, Klagenfurt

Historical: Founded in 1952 under the Federal Ministry of Education.

Staff: 1.

Budget: 1970 - A.S. 423,000.

MAJOR RESEARCH PROJECT IN PROGRESS

Experimental classes in comprehensive vs traditional education

Researchers: H. BRANDAUER, H. HIEDEN, F. BURGSTALLER, W. SCHÖLER

Starting date: September 1970

Probable completion date: 1974

Purpose: To determine the feasibility of the comprehensive school.

Methods: Experimental syllabi.

XXIII. *Name of institute:* PÄDAGOGISCHES INSTITUT DER STADT WIEN (Institute of Education of the Municipality of Vienna)

Address: Burggasse 14-16, A-1070 Vienna

Historical: Founded in 1868 under the Municipality of Vienna.

Staff: 19 full-time
155 part-time

Budget: 1970 - approximately A.S. 3.8 million.

MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

1. *Influence of intelligence and environment on scholastic achievement*

Responsible researchers: F. BEER, N. KUTALEK, H. SCHNELL

Number of research workers engaged in project: 14

Time spent on project: 4 years

Publication: The report of the project has been published by Verlag für Jugend und Volk, Vienna-Munich, 1968

Purpose: To determine the distribution of the characteristics mentioned in the title over age, social layer, regional origin, type of school; correlations.

Methods: Empirical, statistical.

2. *Pre-primary classes as a means of promoting talent*

Responsible researchers: F. HÖDL, F. LANZELSDORFER, H. SCHNELL, K. SRETENOVIC

Number of research workers engaged in project: 13

Time spent on project: 5 years

Publication: The report of the project has been published by Verlag für Jugend und Volk, Vienna-Munich, 1970

Purpose: To check later scholastic achievement of former pre-primary pupils.

Methods: Empirical, statistical.

Conclusions: Advantages still tangible after four years.

MAJOR RESEARCH PROJECTS IN PROGRESS

1. *Private remedial instruction in the Vienna area*

Responsible researchers: F. BEER, N. KUTALEK

Number of research workers engaged in project: 18

Starting date: 1968

Probable completion date: Autumn 1971

Purpose: Extent, distribution, intensity, cost, social dependence of private remedial instruction (tutoring); correlations.

Methods: Empirical, statistical.

2. *The structure of first grades*

Researchers: F. BEER, N. KUTALEK

Starting date: 1966

Probable completion date: Late 1971

Purpose: To establish a base for pedagogical and administrative measures for reducing difficulties in first grade.

Methods: Empirical.

XXIV. *Name of institute:* INSTITUT FÜR ERWACHSENENBILDUNG
(Institute for Research in Adult Education)

Address: Imbergstrasse 24, A-5020 Salzburg

Historical: Founded in 1960; independent.

Staff: 3.

Budget: 1970 - A.S. 170,000 (being a subsidy from the Federal Ministry of Education and Arts).

MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

1. *Current problems of university and peri-university adult education*

Researcher: E. SEIFERT

Time spent on project: 18 months

Publication: *Horizonte österreichischer Erwachsenenbildung*, Verlag Neue Volksbildung, Vienna 1968, pp. 147-237

Purpose: To promote collaboration between universities and adult-education authorities.

Methods: Documentation, literature, programmes, international comparison.

Conclusions: Importance of scientific andragogics stressed.

2. *Professional vs liberal education*

Researcher: E. SEIFERT

Time spent on project: 9 months

Purpose: To assess the relationship between vocational and general education.

Methods: Theoretical, using relevant literature.

Conclusions: Interpenetration evident, both to be subsumed under lifelong education.

3. *Situation and tasks of the "Kärntner Bildungswerk"* (an adult education association in Carinthia)

Responsible researcher: H. BLASCHEK

Number of research workers engaged in project: 2

Time spent on project: 6 months

Purpose: To serve as a policy aid for the institution named in the title.

Methods: Study of programmes and reports, confrontation with theoretical possibilities.

Conclusions: More staff required.

MAJOR RESEARCH PROJECTS IN PROGRESS

1. *Problems of education in rural districts*

Responsible researcher: H. BLASCHEK

Number of research workers engaged in project: 2

Starting date: 1965

Probable completion date: 1971

Purpose: To suggest ways and means to intensify rural education.

Methods: Discussions with experts; seminars; literature; international comparisons.

2. *Situation of adult education at St. Johann* (province of Salzburg)

Researchers: J. WERNDEL, M. RASSEM, S. PAUL

Starting date: Late 1969

Probable completion date: 1971

Purpose: To establish a base for proposing a general programme of education for the town.

Methods: Empirical.

3. *Lifelong education*

Researcher: E. SEIFERT

Starting date: 1969

Probable completion date: 1972

Purpose: To create a theoretical base for the problem of lifelong education, especially its aims.

Methods: Discussions with representative experts from all strata of society and education; literature.

XXV. *Name of institute:* ÖSTERREICHISCHE FORSCHUNGSSTIFTUNG FÜR ENTWICKLUNGSHILFE (Austrian Research Foundation for Development Aid)

Address: Türkenstrasse 3, A-1090 Vienna

MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

1. *Development as a collective learning process*

Responsible researcher: H. MILLENDORFER

Number of research workers engaged in project: 3

Time spent on project: 11 months

Publication: *Forschungsbericht der ÖFSE*, March 1970

Purpose: Measurement of the influence of education on economic achievement.

Methods: International comparison of highly aggregate data in regional aggregates.

Conclusions: A regression function with $R^2 = \cdot 96$ was developed.

2. *Bottlenecks in education*

Researchers: C. GASPARI, H. MILLENDORFER

Time spent on project: 4 months

Purpose: To assist in educational planning.

Methods: World-wide international comparison of highly aggregate educational data.

Conclusions: Bottlenecks particularly in Moslem countries of the Near East; less marked in Latin America, south-eastern Europe, Britain and the Commonwealth.

MAJOR RESEARCH PROJECT IN PROGRESS

Education - a production factor and a consumable

Responsible researcher: H. MILLENDORFER

Number of research workers engaged in project: 3

Time to be spent on project: 1½-2 years

Purpose: To determine a function describing education in terms of supply and demand.

Methods: Combination of results of international cross-sectional analyses with the results of moving averages.

XXVI. *Name of institute:* INSTITUT FÜR BILDUNGS- UND BERATUNGSFORSCHUNG
(Institute for Technical Assistance Research)

Address: Schottenbastei 6, A-1010 Vienna

MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

1. *Special problems in cybernetic education*

Researchers: C. FLURSCHÜTZ, P. RIPOTA

Time spent on project: 1968-69

Purpose: To establish parameters of information theory applicable to education.

2. *Problems of literacy in Turkey*

Researcher: A. MALASCHOFSKY

Time spent on project: 1968-69

Publication: *IBB-Bulletin* 3/69

Purpose: To analyse the fight against illiteracy in a rural area.

3. *Organisation, instruments and problems of research policy*

Researcher: E. ZARUBA

Time spent on project: 1969-70

Purpose: To compare research policies of western and eastern industrialised nations.

Methods: International comparison.

4. *The status of management education in Austria 1969-70*

Researcher: G.E. ORTNER

Time spent on project: 1969-70

Purpose: See title.

Methods: Survey of special institutions, university curricula and courses in major industrial companies.

5. *Publications of full professors of education, philosophy and psychology*

Researcher: G. ZECHA

Time spent on project: 1969-70

Purpose: See title.

Methods: Bibliographical research.

MAJOR RESEARCH PROJECTS IN PROGRESS

1. *Organisation of teaching at the Philosophical Faculty of the University of Vienna*

Researcher: M. FISCHER

Starting date: September 1969

Probable completion date: January 1971

Publication: Interim Report *The Effect of University Organisation upon Teaching and Behaviour of Students* read to the Seventh World Congress of Sociology at Varna, September 1970

Purpose: To assess learning behaviour of students as a function of university structure.

2. *Design of a teaching machine for individual instruction*

Researcher: G. GENSCH

Starting date: June 1969

Probable completion date: 1971

Purpose: See title.

Methods: Slides to be incorporated - later extension to audio-visual media envisaged.

3. *The social situation and educational opportunity of Styrian grammar school students*

Researcher: A. EDER

Starting date: Late 1968

Probable completion date: 1971

Purpose: To assess the influence of membership in social and regional groups on educational opportunity.

Methods: Empirical.

4. *The Austrian educational budget*

Responsible researcher: W. CLEMENT

Starting date: October 1969

Probable completion date: 1971

Purpose: To establish a model for public school funds allocation.

Methods: Statistical.

5. *Group work for students of mathematics and physics*

Researchers: The professors of mathematics and physics at the University of Vienna in co-operation with the University Institute of Education

Starting date: Autumn 1969

Probable completion date: Summer 1971

Purpose: To assess the value of university instruction in small groups of students (tutorial system) vs traditional methods.

Methods: Experimental.

XXVII. *Name of institute:* HOCHSCHULE FÜR MUSIK UND DARSTELLENDE KUNST, INSTITUT FÜR MUSIKSOZIOLOGIE UND MUSIKPÄDAGOGISCHE FORSCHUNG (School of Music and Performing Arts, Institute of Sociology of Music and Research in Musical Education)

Address: Lothringerstrasse 18, A-1030 Vienna

Historical: Founded in 1965.

Staff: 3.

MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

1. *The music background and acoustic experience of music students*

Researcher: K. BLAUKOPF

Time spent on project: 2 years

Publication: *Musik und Gesellschaft* no. 2/1968, Karlsruhe

Purpose: See title.

Methods: Questionnaire.

Conclusions: Technical media are changing acoustical experience.

2. *The training of instrumental and vocal teachers in Europe*

Researcher: G. SCHOLZ

Time spent on project: 2 years

Publication: *UE Report*, Vienna 1970

Purpose: To compare the curricula in the fields indicated by the title.

Methods: Questionnaires.

Conclusions: A survey of curricula and syllabi of 42 schols of music in 12 European countries was carried out.

I. EDUCATIONAL RESEARCH POLICY

A.1 PROMOTION OF EDUCATIONAL RESEARCH

Like every other sphere of research, educational research comes under the constitutional principle of *"freedom of research"* (Article 5(3) of the Basic Law (Constitution) of the Federal Republic of Germany). This principle which is also expressly mentioned in the constitutions of most of the eleven Laender, safeguards freedom of research against any political or ideological influence. The subjects and methods of research are determined by the researcher himself, and he alone decides where and how the results of his work shall be published. The State makes available the research facilities.

Educational research institutions

Educational research in the Federal Republic of Germany is pursued in independent research institutes outside the universities, in institutes which are linked with the educational administration, in university institutes and by individual researchers.

To the extent that educational research is carried out by institutions of higher education, it should be noted that these are institutions of the State. But on account of the constitutional provision guaranteeing freedom of research, the State exercises no influence over them. This, however, does not mean that the State cannot stimulate research projects, eg through a Federal Ministry, or a Land Ministry of Education.

The following *university centres* are particularly concerned with educational research: the Centre for New Learning Methods at the University of Tübingen, the Centre for Educational Research at the University of Bielefeld, the Working Group for Instructional Research at the Educational Seminar of the University of Göttingen, the Institute for the Teaching of the Natural Sciences at the University of Kiel, and the Special Centre "Educational Research" at the University of Constance.

There are also many research institutes, research departments, study groups, associations and organisations concerned with educational research that are *not associated with universities* or other institutions of higher education. These institutions are specialised, do not as a rule provide study courses, and are often centred on applied research and development. Their research projects are numerous. Some of them they carry out themselves, others they commission. The special value of these institutes lies in the fact that they can undertake projects in direct response to practical needs.

The grouping of the above-mentioned institutes and organisations outside the universities causes difficulties. The institutions are in every respect too divergent to be purposefully grouped according to their legal form or their size, their supporting bodies or their respective tasks. Their organisation and activities will be described in Part II.

The Councils

Attention must also be drawn to the function of the two Councils. The *Deutscher Bildungsrat* (German Education Council) has the following objectives:

- to draft development plans for education which take into account the cultural, economic, and social needs of society and the future demand for trained personnel,

- to make proposals relating to the structure and content of the educational system,

- to calculate financial requirements, and

- to propose recommendations for long-term plans at all levels of education.

This institution, set up in 1965 pursuant to an administrative agreement between the Federation and the Laender, stimulates educational research by commissioning advisory studies and reports. It provides at the same time an example of co-operation between Federation and Laender and between administrative organs and scientific institutions.

The Federation and the Laender also work together in the *Wissenschaftsrat* (Science Council), which was likewise established in accordance with an administrative agreement concluded in 1957. Its task is to draw up overall plans for the promotion of humanities and science in the Federal Republic of Germany. It also submits an annual priority programme and draws up recommendations for the use of funds appropriated for scientific research in the budgets of the Federation and the Laender. Among other publications, the Wissenschaftsrat issued detailed recommendations in 1965 on the expansion of scientific institutions, in which the research institutes, and hence those dealing with educational research, are the subject of critical study.

New developments

Alongside the above-mentioned institutions, the Federal Government and the Laender Governments in the Federal Republic promote educational research. In order to avoid a repetition of the facts enumerated in the First Survey, attention is drawn to the appropriate section of that Survey. One of the most important changes is that in May 1969 the Federal Government received *new competences in education policy* as part of the finance reform. According to the new Article 91b of the Basic Law (Constitution), "the Federal Government and the Laender Governments can co-operate at the national level on the basis of agreements on educational planning and on the promotion of institutions and projects of scientific research." The sharing of the costs is determined by the agreement. As a first contribution of the Federal Government to joint educational planning with the Laender, the Federal Ministry of Education and Science published the *Education Report* in June 1970. This report, inter alia, explicitly states that the Federal Government sees the systematic promotion of educational research as an essential goal of education policy.

Another new development concerns research into vocational and technical education. On the basis of the new Vocational Education Act which came into force in August 1969, a Federal Institute as a body of public utility directly linked with the Federal Government has been set up to promote *vocational and technical education* by means of research. Its predominant task is to clarify the bases of such education, to ascertain its content and goals, and to prepare its adaptation to technological, economic and social development. The Institute was founded in Berlin in 1970. It will also investigate correspondence courses for vocational and technical education and make proposals for their further development and organisation. The Institute is at present beginning with a stock-taking of the situation. In this, it is in close co-operation with the *Institute for Labour Market and Vocational Research* at Erlangen, where a card index of all current research work in the field of vocational and technical education and re-training has been established.

Promotion by Federal and Laender Ministries

Stress should be laid on the fact that certain Federal Ministries, ie the Federal Ministry of Economic Affairs, the Federal Ministry of Labour and Social Affairs, the Federal Ministry of Family and Youth Affairs as well as the Federal Ministry of Defence commission research which may also concern educational problems. Investigations, which come under the heading of educational research, are in particular promoted by the Federal Ministries of Education and Science, of Family and Youth Affairs (via the German Youth Institute), and of Food, Agriculture and Forestry (in the field of rural education).

The Laender hold sole responsibility for schools and higher education. The policies adopted by the Ministries of Education in stimulating educational research, may differ from Land to Land. As a rule, the stimulus for such promotion is forthcoming from advisory councils and ad hoc committees, as well as from the research institutes within the universities, which exist in all Laender.

Thus, there is, for example, in *North Rhine-Westphalia* a Planning Department with special committees for primary schools, secondary schools, upper secondary education, pre-school education, and vocational training. Furthermore, there are within the Planning Department research groups on the evaluation of comprehensive school experiments, and an advisory committeeon comprehensive schools. The Institute for Educational Technology in Paderorn was especially established by the Land Government of North Rhine-Westphalia to carry out research in this field.

In the Land of *Rhineland-Palatinate*, project groups observethe various school experiments (eg common entrance stage, comprehensive schoolexperiments). They consist of a team of researchers which in co-operation withthe teachers engaged on each respective school experiment observes, describes, and evaluates the experiments. Moreover, the Ministry of Education co-operates constantly with supra-regional educational research institutes (Frankfurt, Munich, Berlin).

In *Baden-Württemberg*, an advisory council has been established in the Ministry of Education to deal with all questions of educational research, planning and policy. In addition, special groups have been formed which are concerned with adult education and vocational education. Research contracts are awarded for such projects as the "development of talent" in rural area, education and economic growth, the reasons for premature school-leaving, etc.

In *Bavaria*, a State Institute for Educational Research and Planning was set up in 1966. Furthermore, a Bavarian State Institute for Secondary Grammar School Pedagogics was established (from 1971 onwards, the State Institute for School Pedagogics). It is primarily concerned with curriculum development and further training of teachers. Ten specialised committees exist for elaborating new curricula for general and vocational schools. In the Bavarian Ministry for Education and Culture, there is a special section for educational statistics and educational planning as well as a Permanent Committee for Educational Planning to co-ordinate and intensify the various planning activities in the individual departments and sections. As part of this Committee, there are 16 working groups to deal with educational research, educational planning, and also with educational statistics. The working groups are as a rule composed of the specialists dealing with planning in the respective field, and can call in experts from outside the Ministry. Project groups exist for pre-school education, school career advice, and evaluation of school experiments. A University Planning Committee was also set up.

Matters of educational policy that are of supra-regional importance and call for a common approach and joint decision are discussed by the *"Standing Conference of Ministers of Education"*. It is a voluntary institution composed of the eleven Ministers or Senators of Education established in 1948 with a view to pursuing common interests. The Laender co-ordinate their proposed measures through the medium of this Conference, which they created and control themselves, in order to enable them better to carry out their responsibilities in education for the country as a whole. In the past decade, the Conference has viewed its task increasingly under the aspect of educational planning and research.

The following examples are typical of institutions engaged exclusively or primarily in educational research. They are mentioned to illustrate the variety of educational research institutions, which are totally or partly being promoted by the Laender Governments. A detailed survey on the most important institutions is given in Part II.

The *"German Institute for International Educational Research"*, Frankfurt (originally founded in 1952 under the name of "Hochschule für Internationale Pädagogische Forschung"), a foundation under public law, financed since 1964 by the Land Hesse, where it has its seat, and the other Laender through the so-called Königstein Agreement, is primarily concerned with empirical research and in particular with the introduction and further development of educational tests in the Federal Republic of Germany. The Institute has published numerous studies on the educational systems of other countries and prepared advisory reports on current problems of educational policy for public and private agencies. A special feature of the Institute is that the Laender can second teachers from all types of schools to carry out research work there. The Institute has helped to narrow the gap between educational practice and theory.

The *"Institute for Educational Research within the Max-Planck Society"*, Berlin, commenced its activities in 1964. Its work is interdisciplinary and is carried out by educators, psychologists, sociologists, economists and jurists. The emphasis is on basic research.

Various *denominational institutions* arrange lectures and lecture weeks on educational problems, and publish the results of educational research work done by their members and by others commissioned to carry out specific projects.

Examples of these are the "Deutsches Institut für Bildung und Wissen" (German Institute for Education and Science), Paderborn, the "Deutsches Institut für Wissenschaftliche Pädagogik" (German Institute for Scientific Pedagogy), Münster, the "Forschungsstelle der Evangelischen Studiengemainschaft" (Research Centre of the Evangelical Study Group), Heidelberg, and the "Comenius Institute", Münster.

Educational Research is also carried out by the "Internationales Schulbuchinstitut" (*International Textbook Institute*), Brunswick and the "Pädagogisches Zentrum" (*Education Centre*), Berlin, although they specialise in other fields. The latter organises conferences on topical educational subjects and publishes educational documentation material. The Centre's main purpose is to relate new developments in education and the social sciences to practical education, and to ensure the early application of research findings.

Adult education is the main field of activity of the "Pädagogische Arbeitsstelle des Deutschen Volkshochschulverbandes" (Pedagogical Institute of the German Association of Adult Education Centres), Frankfurt, which has published the results of a number of research projects and a good deal of documentation.

The Volkswagenwerk Foundation

In the last few years, the *Volkswagenwerk Foundation* has increasingly turned towards the promotion of larger projects, which it initiated primarily itself. It is its task to promote science and technology in research and teaching. It supports research institutions worthy of promotion by means of grants for particular purposes. The Volkswagenwerk Foundation launched during the period under review a number of major projects in educational research and development. The following projects can serve to illustrate this initiative:

- The promotion of research and development work on a new curriculum of elementary education for the 4-8 year olds;
- The Didactics Programme, which is concerned with the improvement of teaching methods of school and university subjects (eg didactics of engineering, of medical studies, of mathematics, etc);
- The Tutorials Programme, the aim of which is to try out new models of instruction in small groups of students at the universities for certain representative subjects; up to the end of 1969, a total of 84 programmes of tutorials had been promoted in mathematics, chemistry, biology, medicine, sociology, philology, linguistics, etc;
- The promotion of remote studies by multi-media systems;
- The University Information System (HIS), set up in 1969 to build up a data bank for higher education.

A.2 PLANNING AND CO-ORDINATION

At present, there is no central institution which co-ordinates educational research as a whole. Recent developments, however, aim at achieving such co-ordination.

The Federal Government and the Laender Governments have, on the basis of the amendment of Article 91b of the Basic Law, set up a joint Commission for educational planning by an agreement of 25 July 1970. This Commission has established a working party for innovation in education. It has the task of drafting proposals for joint innovation projects in educational planning and educational research and of preparing agreements between the Federal Government and the Laender Governments to promote such projects. The working party's programme comprises: the elaboration of a plan for the organisation and co-ordination of curriculum research and development; the drafting of an agreement on the co-ordinated preparation, implementation, and scientific evaluation of pilot experiments in schools and universities; the elaboration of proposals for the development and co-ordination of educational research. The working party has 16 members; 5 members are appointed by the Federal Government and 11 by the Laender.

Co-ordination of research into vocational and technical education will be achieved by means of the newly established Federal Institute for Vocational Education Research in Berlin. The School Building Institute of the Laender in Berlin is competent to deal with the co-ordination of research projects concerning school building. Furthermore, the Education Council and the Science Council contribute to the co-ordination of educational planning and research initiated by them. The Co-ordinating Committee which discusses all matters of importance to both Councils, can also deal with such co-ordination problems.

It should also be mentioned that the Conference of West German University Teachers of Education fulfils a certain co-ordinating function. The German Society for the Educational Sciences (Deutsche Gesellschaft für die Erziehungswissenschaften) has a promoting and co-ordinating function in this field. It supports research projects, organises annual congresses and meetings and sets up permanent working groups (eg working groups for comparative educational science; learning theory and learning psychology; empirical educational research).

A.3 FINANCE

Both the institutions of higher education, and most of the educational research institutes referred to, are financed mainly from funds appropriated in the budgets of the Laender, and in some cases of the Federation In addition, considerable sums are provided by private foundations.

As regards institutes outside the universities, the following methods of finance may be distinguished:

- Support solely from the Land where the institute is situated. Thus, for instance, the Pädagogisches Zentrum in Berlin, being an organisation under the authority of the Senator for Education, is largely financed by the Land Berlin.
- Finance provided by the Land in which the institute is situated, and by the other Laender, as, for instance, in the case of the German Institute for International Educational Research. An other example of joint financing by all Laender is the Schulbau-Institut (School Building Institute).
- Financial support provided by the Federation and the Laender jointly, eg in the case of the Bildungsrat, the Wissenschaftsrat, the Deutsche Forschungs-

gemeinschaft (German Research Association) and the Max-Planck Society, and hence its Institute for Educational Research.

- Funds may also be provided by organisations which are financed by the Federation and the Laender and which themselves stimulate research activity, as in the case of the Bildungsrat.

- Finally, support may be forthcoming from private sources (foundations etc).

Educational research at the universities and other institutions of higher education is financed by the budget of the institution concerned as approved by the Parliament of the individual Land. The budgets of these institutions are part of the budget of the Ministry of Education, which in turn is incorporated into the overall budget of the Land in which the institutions are located. Apart from the basic finance provided by the Land, additional financial support for many research projects is granted, inter alia, by the Deutsche Forschungsgemeinschaft (German Research Association) and the Volkswagenwerk Foundation.

The Deutsche Forschungsgemeinschaft, which is financed by the Federation, the Laender and by industrial firms through the Stifterverband für die Deutsche Wissenschaft (Founders' Association for German Science and Scholarship), is a central self-governing organisation for the promotion of research in the Federal Republic. It provides funds for research projects, encourages co-operation among university teachers, co-ordinates research activities, advises governments and parliaments on scientific matters, and entertains relations with scientific organisations in other countries. It is particularly interested in the promotion of young scholars.

The Volkswagenwerk Foundation, in 1968, allocated 18 million DM for a special programme of educational research. It also provided 20 million DM for curriculum research into the teaching of mathematics and the natural sciences. Furthermore, the Foundation supported the development of educational technology. So far, 125 research and development projects concerning programmed instruction, language laboratories and educational television have received grants. A total of 13.5 million DM has already been made available for this task. In 1969, the Foundation paid particular attention to the improvement of educational technology in the field of higher education for which a sum of 17 million DM has been provided (for details cf Part II).

Another foundation which contributes to financing educational research projects, is the Fritz-Thyssen Foundation. Its general aim is to promote research in the arts, science and medicine.

Furthermore, the Stifterverband für die Deutsche Wissenschaft receives many small donations, which mount up to a considerable sum, from industrial firms for the promotion of the humanities and science. The greater part of this sum is transferred to the Deutsche Forschungsgemeinschaft and distributed by it, whilst another part goes to the Max-Planck Society, and hence to its Institute for Educational Research. Finally, special mention should be made of the Max-Traeger Foundation which devotes itself exclusively to the promotion of educational research.

The complex situation described under A.1-3 makes it impossible at present to give any exact figures on the overall expenditure for educational research during the period 1969 and 1970.

B. PRIORITY FIELDS

The setting of priorities for educational research has repeatedly occupied the Standing Conference of Ministers of Education. On 9-10 October 1969 the Conference adopted the following statement:

> "During the past years, the Standing Conference has on various occasions drawn attention to the significance of educational research for a future oriented educational policy. Above all, it was pointed out in the statement of principle on educational planning of the Conference on 25-26 June 1964 that systematic research was necessary to examine the efficiency of existing educational institutions from the qualitative standpoint. In the meantime, the Laender have sparked off and promoted countless initiatives in educational research. For this, they have established various institutions, which are in part financed by the individual Land, in part by the Laender jointly, and in part together with the Federal Government. Alongside this, a series of research projects has been commissioned from the universities.
>
> The German contribution to the first European Survey of educational research, compiled by the Council of Europe describes the state of educational research in the Federal Republic of Germany in 1968-69. This document reveals a positive development in educational research, but at the same time makes clear that further promotion is urgently needed.
>
> In view of the financial resources which are only available on a limited scale and of the as yet small number of scientists in the domain of educational research, it is imperative for priorities to be set. In the light of the problems of educational policy urgently awaiting decision, the Standing Conference of Ministers of Education thus regards it as necessary to indicate certain spheres of educational research, where assistance is needed to prepare the necessary political decisions.
>
> The following groups of topics should receive priority in educational research:
>
> (a) curriculum problems in the field of school and higher education, in particular
>
> - learning aims and learning contents
> - didactics and methodology
> - possibilities and limits of instruction integrating several subjects in the intermediate stages of all types of school
> - courses of study at universities and colleges (Fachhochschulen) and their relationships to each other
> - correspondence courses;

(b) measurement, assessment and comparison of achievement at school and university;

(c) scientific evaluation of school experiments;

(d) research into educational sociology:

- interdependence of school structure and socio-geographical factors
- educational needs of adults
- problems of communication between art producers and art consumers."

The reform movement in the Federal Republic of Germany has given in particular marked impulses to curriculum research and development. In March 1970 the Conference decided to establish an institution to make the results of curriculum research generally available and to co-ordinate further work in this field and advocated the setting up of a "Central Institute for Curriculum Development". The discussions on the implementation of this decision are at present still being continued within the Conference and the Educational Planning Commission.

C. INFORMATION

An educational documentation and information centre at the national level is not yet in existence. However, the Standing Conference of Ministers of Education decided in June 1968 that until such a centre was established the Conference Secretariat should ensure a constant flow of information on all educational research projects commissioned or stimulated by the Ministries of Education of the Laender.

In July 1969, the Ministers of Education decided to carry out an experimental programme of whole-day schools, in accordance with the proposals of the Education Council. Another experimental programme, which was also proposed by the Education Council, concerns comprehensive schools. Each individual school experiment is controlled and evaluated by an educational research institute. The Secretariat of the Conference in co-operation with the Ministries of Education acts as a documentation and information centre for these experimental programmes.

The educational research projects which have been carried out in the last few years at the universities, the colleges of education and research institutes are recorded by the Pädagogisches Zentrum in Berlin on the basis of a questionnaire.

The Co-ordinating Office for the Documentation of Social Science Research registers research projects concluded, in progress, or planned. The results of the survey carried out in 1969 by a questionnaire distributed to all institutes concerned will be published in 1971. A similar survey concerning social science research in 1970 is at present being prepared. Eight organisations co-operate in the Co-ordinating Office, the Secretariat of which is located in Bad Godesberg. The activities of the Office have revealed that a great number of important educational research projects are carried out by institutes which are not primarily concerned with educational research.

In the Laender, the research projects commissioned or stimulated by the Ministries of Education are registered in different ways. In Rhineland-Palatinate and Baden-Württemberg, for instance, registers of research projects are maintained by the respective Ministry of Education. The bodies responsible for educational policy study the regular reports prepared by the research institutes in order that the results may be applied in preparing policy decisions.

In conclusion, it should be mentioned that both the Volkswagenwerk Foundation and the German Research Association list, in their annual reports, the research projects they have financed.

In this way a regular flow of information on educational research is maintained. It is also supported by the large libraries, especially the Deutsche Bibliothek at Frankfurt, the university libraries and the specialised educational libraries, as well as by the numerous educational periodicals. However, inadequate experience exists as yet on how to put into practice the results of educational research and how to evaluate adequately the experiments undertaken at all levels of education. New forms of co-operation between researchers, administrators and teachers are needed to fulfil these tasks and this may also give a new impetus to documentation and information concerned with educational research.

D. NEW TRENDS AND DEVELOPMENTS

The mounting cost of research inevitably leads to greater specialisation. The research institutes, and especially the universities, are increasingly concentrating their activities on special fields. This raises new problems of co-ordination and setting of priorities.

At the same time, educational research itself is going through a process of change. Having long been determined by philosophical and historical problems, it is now increasingly moving towards empirical methods of research closely related to the class room.

Emphasis in educational research as well as in educational administration and educational policy clearly lies in the domain of the curriculum, for which there exists no precise German term. Hence, to all intents and purposes the term "curriculum" is taken over in its broad Anglo-Saxon sense. In most discussions and investigations it is generally held that the directives for the future path of education will be found through a scientific examination and reform of the curriculum. However, the very divergent views on general policy becoming now more visible also in the Federal Republic have not made it possible to arrive as yet at a basic consensus on the educational policy of the future.

II. ACTIVITIES OF EDUCATIONAL RESEARCH ORGANISATIONS

Replies were received from the following organisations:

I. Education Centre, Berlin

II. Institute for Educational Research within the Max-Planck Society, Berlin

III. Special Research Sector for Education Research, University of Constance

IV. Institute for Labour Market and Vocational Research, Erlangen

V. German Institute for International Educational Research, Frankfurt

VI. Pedagogical Institute of the German Association of Adult Education Centres, Frankfurt

VII. Institute of Urban and Regional Educational Planning, Technical University of Hanover

VIII. Working Group for Empirical Educational Research, Heidelberg

IX. Institute for Education in the Natural Sciences, Kiel

X. Bavarian Institute for Educational Planning and Research, Munich

XI. German Youth Institute, Munich

XII. German Institute for Scientific Pedagogy, Münster

XIII. German Institute for Education, Paderborn

XIV. German Institute for Remote Studies, Tuebingen

XV. German Education Council, Bonn - Bad Godesberg

XVI. German Research Association, Bonn - Bad Godesberg

XVII. Volkswagenwerk Foundation, Hanover

XVIII. School Building Institute of the Laender, Berlin

XIX. Central Archives for University Building, Stuttgart

. *Name of institute:* PÄDAGOGISCHES ZENTRUM
(Education Centre)

Address: 1 Berlin 31, Berliner Strasse 40/41

Managing Director: Dr. Peter Hübner

A. HISTORICAL

1. Year of foundation: 1965.

2. The Centre was founded on the initiative of the Berlin Senate.

B. ORGANISATION AND PROGRAMME

1. The Centre is a scientifically independent institution subject to the administration of the Berlin Senate.

2. It has no board of trustees.

3. It has the following divisions:

- Administration
- Library and Documentation
- Didactical Service
- Educational Planning and Curriculum-Development
    - Social Learning in Elementary Schools
    - Mathematics in Elementary Schools
    - Science Education (Elementary Schools)
    - Early beginning of English language teaching
    - Sex Education
- Research and Counselling with respect to School Experiments
- Social Work (Informal Education)
- Behavioural Problems in Elementary Schools
- Office for the evaluation of East-German certificates
- Library of Contemporary History.

4. Staff in 1970

	Full-time	Part-time
Total	147	4
Academically trained staff	42	3

5. Total budget

1968	3,639,000.- DM
1969	3,461,000.- DM
1970	3,973,000.- DM

Main Financial Source: Senate of Berlin.

6. The Centre does not participate in the formal education of teachers, it develops, however, new models for in-service training.

7. No participation in the training of educational researchers.

8. Programme: There is a rapid increase of knowledge concerning scientific and technological data on structures and contents of teaching-learning processes. Primarily this knowledge is being accumulated in educational research and development institutes that have become separate from educational practice. It is very difficult, therefore, and takes a very long time to transfer data thus accumulated and to effect cognitive and behavioural changes in those practically handling the learning-teaching situation. In addition, the gap between scientific developments on the one hand and knowledge actually influencing school practice on the other is becoming greater and greater.

At present, the main task of the Education Centre is to develop more efficient ways of getting schools to make use of scientific and technological data concerning education and training, as conventional methods of evaluating and disseminating information have proved inefficient. This information, offered in the form of publications, pamphlets, conferences, seminars, etc, tended to be too general in character to meet the more specific demands of teachers. Such means of communication are of scarcely any use in keeping teachers informed of new trends in educational research. They are, in fact, doomed to failure. In consequence, teachers have had to rely on their own resources in their adaptation and application of abstract and general scientific and technological data.

In order to increase the educational, psychological and sociological competence of the Centre's staff for counselling and help in actual school problems, teams consisting of both staff members and teachers have been formed. These teams assess the individual problems and carry out the counselling activities.

C/D. MAJOR RESEARCH PROJECTS CARRIED OUT IN 1969-70 AND IN PROGRESS

C/D.1 *Instructional planning and curriculum development for the elementary school*

Working groups to develop and test modern teaching approaches

a) *Social learning in elementary schools*

Researchers: HEYER, LEHMANN, RANKE

Starting date: 1969

Purpose: Development of approaches in modern teaching.

Procedure: Curriculum development.

b) *Mathematics in elementary schools*

Researcher: PANKNIN

Starting date: 1970

Purpose: Development of approaches in modern teaching.

Procedure: Curriculum development.

c) *Science education (elementary schools)*

Researchers: DALLMANN, PFEIFFER, SCHÄTZE

Starting date: 1968

Purpose: Development of approaches in modern teaching.

Procedure: Curriculum development.

d) *Early beginning of English language teaching*

Researchers: ASHEUER, PREIBUSCH

Starting date: 1969

Purpose: Development of approaches in modern teaching.

Procedure: Curriculum development.

e) *Sex education*

Researcher: VERGIN

Starting date: 1970

Purpose: Development of approaches in modern teaching.

Procedure: Curriculum development.

The projects of the working group are expected to be completed in 1973.

C/D.2 *Research and counselling with respect to school experiments - social experience of pupils in comprehensive schools*

Researchers: BUHLOW, HOPF, MAGDEBURG, NAGEL, PREUSS

Starting date: 1969

Purpose: To give empirical answers to the following questions:

- To which extent is the behaviour of girls and boys determined by traditional sex roles. The following facts are to be examined in detail:

  the role perception of girls in their school achievements (school achievements, chosen subjects), in their social activities, in the family and in their future profession;

  the image of their own role as held by teachers, parents, boys and other girls and perceived by the girls themselves;

  the role perception boys have of girls;

  attitudes towards changes of role-identification.

- What extent and what kind of quality do social experiences gain in comprehensive schools, on what facts do they depend and in how far is it possible to use the gained social experience for the interpretation of individual differences in behaviour. The following facts are to be examined in detail:

  to what extent are social relations and social contacts influenced by the social background of pupils;

  to what extent are individual differences interpreted as results of social structure;

  what kind of difficulties exist to show aspects of social status (ie family situation, profession of parents);

  do social experience which help the pupil to accept his social status, lead to feelings of guilt and resignation or do they lead to an attitude which implies a change of those norms and values by which pupils from the lower classes used to be discriminated.

- Examinations on the perception of authority structures in schools, attitudes to political behaviour within the school and the actual political behaviour of pupils.

Procedure: Empirical examination.

C/D.3 *Behavioural problems in elementary schools*

Researchers: KEPPLER, WELLENDORF

Starting date: The project is at present still in the planning stage

Purpose: Development of educational and therapeutic approaches to help solve behavioural and learning problems in elementary schools.

Procedure: Counselling and supervision.

II. *Name of organisation:* INSTITUT FÜR BILDUNGSFORSCHUNG IN DER MAX-PLANCK GESELLSCHAFT (Institute for Educational Research within the Max-Planck Society)

Address: 1 Berlin 31, Blissestrasse 2

Director: Professor Dr.h.c. Hellmut Becker

A. HISTORICAL

1. Year of foundation: 1963.

2. The Institute was founded to carry through especially interdisciplinary basic research work in the field of education. The initiative to found the Institute was taken by Professor H. Becker.

B. ORGANISATION AND PROGRAMME

1. The Institute is an organisation within the Max-Planck Society for the promotion of research.

2. The Institute has a scientific advisory board consisting of 16 members.

3. Research divisions for: Comparative Study on the Course of Educational Reforms in Seven Countries; Curriculum Study; Project School Achievement; Pre-vocational training and Vocational Autonomy; Analysis of the Training of Secondary School Teachers during the Probationary Year in the Federal Republic of Germany; Acquisition and Use of Educational Qualifications (Manpower-Project); Study on Socialisation.

4. Staff

			Full-time	Part-time
Total:	148	thereof:	141	7

5. Total budget

1968	4,334,000.- DM
1969	4,334,000.- DM
1970	4,870,000.- DM

Predominant source of finance: Federation and Laender of the Federal Republic of Germany supporting the Max-Planck Society.

C/D. MAJOR RESEARCH PROJECTS CARRIED OUT IN 1969/70 AND IN PROGRESS

C/D.1 *Vergleichende Studie über Schulreform in der BRD, DDR, England und Wales, Frankreich, Schweden, Österreich, UdSSR* (Comparative study of school reform in the Federal Republic of Germany, the German Democratic Republic, England and Wales, France, Sweden, Austria and the USSR)

Researchers: S.B. ROBINSOHN and collaborators

C/D.2 *Eine empirische Untersuchung über die Art und die Beeinflussung des Nationalbewusstseins von Schülern der Oberstufe Westberliner Gymnasien durch den Gemeinschaftskundeunterricht* (An empirical investigation into the type and the influence of national consciousness in pupils of the upper stage of West Berlin grammar schools as a result of civics instruction)

Researcher: A. HARNISCHFEGER

C/D.3 *Lehrerbildung im internationalen Vergleich unter Einschluss schulpraktischen Programme* (Teacher training compared internationally with the inclusion of practical programmes for schools)

Researcher: S. SCHMIDT-TRAUB

C/D.4 *Theorie und Praxis in der Lehrerbildung* (Theory and practice in teacher training)

Researcher: C. HÄNDLE

C/D.5 *Theorie und Technik des internationalen Vergleichs unter besonderer Berücksichtigung der vergleichenden Bildungsforschung* (Theory and technique of international comparison with particular consideration paid to comparative educational research)

Researcher: BERSTECHER

C/D.6 *Arbeitskräfteplanung bei expansiver Bildungspolitik. Darstellung am Beispiel Schwedens* (Manpower planning as part of expansive educational policy. Outline using the example of Sweden)

Researcher: O. STEIGER

C/D.7 *Raum- und Lehrerbedarf in Gesamtschulen. Ein Vergleich mit dem dreigliederigen Schulsystem* (Space and teacher requirements in comprehensive schools. A comparison with the three-stream school system)

Researchers: P. SIEWERT, and J. LOHMANN of the Education Centre, Berlin, as pedagogic adviser

C/D.8 *Studentenförderung im internationalen Vergleich* (An international comparison of assistance to students)

Researcher: M. von RUNDSTEDT

C/D.9 *Bildungsplanung im demokratischen und sozialen Bundesstaat* (Educational planning in a democratic and social Federal State)

Researcher: M. QUILISCH

C/D.10 *Bildungsplanung. Ansätze, Modelle, Probleme* (Educational planning - approaches, models, problems)

Researchers: K. HÜFNER, J. NAUMANN

C/D.11 *Die verfassungsrechtliche Stellung privater Hochschulen in den USA, untersucht anhand der Rechstellung der Studenten* (The position from the standpoint of constitutional law of private universities (and colleges) in the USA - examined on the basis of the legal position of the students)

Researcher: W. KARCHER

C/D.12 *Untersuchung über die Referendarausbildung von Gymnasiallehrern* (Investigation into the training of grammar school teachers during their probationary period)

Researchers: H. FRECH, K.H. HEBEL, R. REICHWEIN, S. VELKHOLZ

C/D.13 (provisionally) *Die Hochschule und das System gesellschaftlicher Herrschaftskontrolle* (The university and the system of dominant control in society)

Researcher: U.K. PREUSS

C/D.14 *Arbeitslehre-Unterricht in den Hauptschulen der Bundesrepublik Deutschland* (Instruction in labour theory in the upper elementary school classes of the Federal Republic of Germany)

Researchers: W. VOELMY, A. MÄCHLER

C/D.15 *Grundlagen und Grenzen empirischer Bildungsforschung in Schulen* (Bases and limits of empirical educational research in schools)

Researcher: R. SCHOBER (in collaboration with M. QUILISCH)

C/D.16 *Elternhaus und Schule* (Parental home and school)

Researchers: L. KRAPPMANN, K. KREPPNER, U. OEVERMANN

C/D.17 *Strategien des internationalen Vergleichs. Wirtschafts-, sozial- und bildungsstatistische Begriffssysteme und Forschungsplanung in der vergleichenden Entwicklungsforschung - Texte und Dokumente zur Bildungsforschung - im Klett Verlag, Stuttgart, 1970* (Strategies of international comparison. Economic, social and educational statistical concepts and research planning in comparative development research - Texts and documents on educational research, published by Klett Verlag, Stuttgart, 1970)

Researcher: B. DIECKMANN

C/D.18 *Ausleseprozesse in der Schule und das Recht auf Bildung* (Selection processes in the school and the right to education)

Researcher: H. DAHLE

C/D.19 *Traditionelle Bildungsökonomie und systemorientierte Bildungsplanung* (Traditional educational economy and system-orientated educational planning)

Researcher: K. HÜFNER

C/D.20 *Untersuchung über Abgänger des Zeitraumes WS 61/62 - WS 62/63 aus der Fakultät Elektrotechnik an der Technischen Universität Berlin ohne Examensabschulss an dieser Fakultät (Wechsler und Abbrecher) - Bildungsweg und beruflicher Werdegang* (Investigation into leavers in the period Wintersemester 61/62 - Wintersemester 62/63 in the Faculty of Electro Engineering at the Technical University of Berlin without a final examination at this faculty (changers and early leavers). Educational path and vocational career)

Researcher: E. NICAEUS

C/D.21 *Ingenieurschulen und -akademien. Bestandsaufnahme und Vorschläge zu anstehenden Reformen* (Engineering schools and colleges. Present position and proposals for reform)

Researchers: D. GOLDSCHMIDT, S. FURCK, M. RICK, F-J. WEISS

C/D.22 *Curriculum-Studien* (Curriculum studies)

Researchers: G. BOVET, D. ELBERS, D. KNAB, J. ZIMMER

C/D.23 *Projekt Schulleistung* (Project school performance)

Researchers: M. von CRANACH, W. EDELSTEIN, H.L. FREESE, D. HOPF,
G. MEISCHNER, H. PAUCK, F. SANG, W. STEGELMANN, H. ZEIHER

C/D.24 *Über die öffentliche Verantwortung fur Berufsausbildung und berufliche Erwachsenenbildung* (On public responsibility for vocational training and vocational adult education)

Researcher: I. RICHTER

C/D.25 *Berufseinführung, berufliches Verhalten und Persönlichkeitsmerkmale ehemaliger Industrielehrlinge* (Introduction to a vocation, vocational behaviour and personality characteristics of former industrial apprentices)

Researchers: a) full-time U. BAMBERG, W. LEMPERT, D. OESTERREICH, W. THOMSSEN

b) part-time R. CZESKLEBA, H. SKARABIS, A. BREMMER, C. OPPELT, G. SCHRICK

C/D.26 *Einstellungen von Gymnasiallehrern zu Problemen der Schule (Teilprojekt des Projekts Schulleistung)* (Attitudes of grammar school teachers to problems of the school - Part of the project school performance)

Researcher: H. PAUCK

C/D.27 *Die Auswirkungen des technischen Fortschritts auf den quantitativen Arbeitskräftebedarf. Ein Beitrag zur Bildungs- und Arbeitsökonomie* (The effects of technical progress on quantitative manpower requirements. A contribution to the economy of education and labour force)

Researcher: A. HEGELHEIMER

C/D.28 *Arbeitskräfteprognosen als Grundlage der Bildungsplanung* (Prognoses on manpower demand as a basis for educational planning)

Researcher: W. ARMBRUSTER

C/D.29 *Ausländische Modelle zur Arbeitslehre* (Foreign models on labour theory)

Researcher: R. NAVE-HERZ

C/D.30 *Arbeitswirtschaftliche Probleme einer aktiven Bildungspolitik, als pilot study hierzu: Politologen im Beruf* (Labour economy problems of an active educational policy, as pilot study: political scientists at work)

Researchers: W. ARMBRUSTER, H-J. BODENHÖFER, D. HARTUNG, R. HUTHMANN, W.D. WINTERHAGER

C/D.31 *Hochschulmethodik* (Methodology of teaching at universities)

Researcher: E. GUHDE

C/D.32 *Bildungsplanung als Systemtheorie* (Educational planning as system theory)

Researcher: S. JENSEN

C/D.33 *Probleme und Methoden einer rationalen Allokation von öffentlichen Mitteln unter besonderer Berücksichtigung der Bildungsförderung* (Problems and methods of a rational allocation of public funds with particular consideration paid to the promotion of education)

Researcher: R. FREUD

C/D.34 *Zur Theorie der Bildungsnachfrage. Ein Beitrag zur Identifizierung der Determinanten privater Nachfrage nach formaler Bildung* (On the theory of educational demand. A contribution towards the identification of determinants of private demand for formal education)

Researcher: W. BERGER

III. *Name of organisation:* SONDERFORSCHUNGSBEREICH BILDUNGSFORSCHUNG AN DER UNIVERSITÄT KONSTANZ
(Special Research Sector for Educational Research at the University of Constance)

Address: 775 Konstanz, Universität

Director: Dr. Helmut Fend

A. HISTORICAL

1. Year of foundation: 1969.

2. Problems of educational policy in the Federal Republic of Germany and the discussion of them since 1964, centred on the question why the educational system is so out-of-date, led to the foundation of the Special Research Sector by the German Research Association on the initiative of the Foundatory Committee of the University of Constance.

B. ORGANISATION AND PROGRAMME

1. The special Research Sector for educational research is affiliated to the University of Constance. It is co-ordinated with the Faculty of Social Science in the form of a staff union of project directors and professors and administratively integrated in the University of Constance.

2. No directing, governing or advisory board.

3. There are at present seven project groups with representatives of sociology, education, psychology and political science.

4. Staff in 1970

Total: 31

Researchers:	1	project director (full-time)
	5	project directors (part-time)
	about 25	academic assistants

5. Total budget

1968	-
1969	1,000,000 DM
1970	1,808,000 DM

Predominant source of finance: German Research Association and the University of Constance.

6. No participation in teacher training.

7. Training of educational research workers by members of the Special Research Sector.

8. Programme and main activities: Investigation of the present educational situation in the Federal Republic of Germany and development of plans and proposals for its improvement.

Main research fields: Reserves of talent and equality of opportunity: relationship between educational density and proportion of working class pupils/students. Comparison of the different types of school (comprehensive schools - traditional schools). Problems of teacher training. Problems of decision making on the aims of instruction. Investigation of the processes of decision making in the field of cultural and educational policy.

Methods: Interviews and questionnaires, tests.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Lehrereinstellungen - Entstehung und Veränderung von erziehungs- und schulbezogenen Einstellungen bei angehenden Lehrern* (Teacher attitudes - Development and change of attitudes towards education and related issues in prospective teachers)

Responsible researcher: H. AEBLI

Number of research workers engaged in project: 4

Starting date: 1967

Probable completion date: 1976

Purpose: Ascertaining of deficiencies in teacher training; elaborating of essential prerequisites for a new model of teacher training.

Procedure: Cross-sectional and longitudinal investigation with tests and attitude questionnaires.

D.2 *Kulturpolitische Entscheidungsprozesse in Baden-Württemberg* (Decision making in educational policy in Baden-Württemberg)

Responsible researcher: W. BESSON

Number of research workers engaged in project: 4

Starting date: 1970

Probable completion date: 1972-73

Purpose: Analysis of political and administrative decisions in the realisation of secondary school reform programmes. - Investigation of the development of the organisational structure and competence of the Baden-Württemberg Ministry of Education since the founding of the South-West State and interpretation of its function in school and university administration. - Analysis of the role of parliament and in particular of the Committee on Education Policy of the Baden-Württemberg Parliament as part of the process of decision making in educational policy. - Investigation of the influence and effects of national associations and institutions on the shaping of educational policy in Baden-Württemberg.

Procedure: Hermeneutic methods of interpreting historical sequences will be combined with socio-scientific analyses. With regard to method, a linking of normative and empirical working methods is to be attempted.

D.3 *Entwicklung und Erprobung lernzielorientierter Tests als Beitrag zu einer didaktischen Entscheidungstheorie.- Ein Grundlagenprojekt der Curriculumforschung* (The construction and evaluation of criterion-referenced tests as a contribution to a theory of educational decision-making. A basic project of curriculum research)

Responsible researcher: K-H. FLECHSIG

Number of research workers engaged in project: 5

Starting date: 1969

Probable completion date: End of 1972

Purpose: Activities of curriculum development are to be analysed on the basis of a model (decision theory), in so far as the activities serve to formulate learning aims. The learning aims obtained in this way are to be used for compiling criterion-referenced tests. The project is centred on elementary education and in particular the teaching of French (pre-school, basic school, 4 to 8 year olds).

Procedure: For the analysis of processes of decision on learning aims, interviews were arranged with chairmen and members of curriculum commissions of the Federal Republic. To investigate the processes of decision, workshop seminars are to be held as simulation experiments, in which the interconnections between processes and products of curriculum development are to be examined more closely. Furthermore the preferences of various groups of persons with regard to the learning aims in the fields to which the project is limited will be investigated.

D.4 *Sozialisationseffekte unterschiedlicher Schulformen* (Socialisation effects in different school types)

Responsible researcher: H. FEND

Number of research workers engaged in project: 5

Starting date: 1969

Probable completion date: 1974

Purpose: Ascertainment of socialisation effects for the purpose of evaluating different school types (comparison of comprehensive schools and traditional schools).

Procedure: Survey methods (questionnaires, tests).

D.5 *Sprachgewohnheiten von Akademikern* (Speech habits of students and university teaching staff)

Responsible researcher: W-D. STEMPEL

Number of research workers engaged in project: 3

Starting date: 1969

Probable completion date: 1974

Purpose: To develop a didactic concept of problems of imparting knowledge and to investigate the problems of general communication at a university.

Procedure: Tests, interviews and essays as the basis for analysing and describing student linguistic habits and for a critical review of language standards applied at a university.

D.6 *Bildungsbiographien und Daseinsvorstellungen von Akademikern* (University graduates' educational biography and their conception of life)

Responsible researcher: H. PEISERT

Number of research workers engaged in project: 6

Starting date: 1968

Probable completion date: Not yet fixed

Purpose: Study of the quantitative and qualitative effects of educational systems; development of instruments to ascertain educational biographies of university graduates (models); analysis of the long-term effects of higher education on the conceptions of life of graduates.

Procedure: Comprehensive questioning (questionnaires, handwritten minutes, tape recorder minutes, list of statements, scales) of some 750 university graduates and non-university trained people. - Secondary evaluation of statistical surveys (micro-census 1964, population census 1970, school data). - The project is conceived as an international comparative study.

D.7 *Regionale Strukturen der Bildungsbeteiligung* (Regional structures of educational participation)

Responsible researcher: H. PEISERT

Number of research workers engaged in project: 4

Starting date: 1969

Probable completion date: 1974

Purpose: Ascertainment of regional and social conditions for educational participation in the post-compulsory school system.

Procedure: Secondary evaluation of census data and official statistics.

IV. *Name of organisation:* INSTITUT FÜR ARBEITSMARKT- UND BERUFSFORSCHUNG (IAB)
(Institute for Labour Market and Vocational Research)

Address: 8520 Erlangen, Strömpellstrasse 14

Director: Dr. Hieter Mertens

A. The Institute is a scientific branch of the Federal Agency for Labour Placement and Unemployment Insurance. It was founded in the summer of 1967 on the initiative of the administrative organs and the President of the Federal Agency. Its task is to survey the current situation and assess future trends of supply and demand in the labour market. The results of its research activities are made available to the public, especially to both sides of industry, political, industrial and scientific organisations, for their guidance.

Scientists and scholars from various fields work together at the Institute, which receives advice from an inter-disciplinary committee of experts.

B. Fields of activity:

- Global and sectoral analysis of the relationships between economic growth and employment trends.
- Surveys of change in sectoral and occupational employment structures. Cyclical research with special regard to the labour market. Observation of technical developments and their effect on the labour market. Research into the nature, relationships and requirements of occupations and the changes they undergo. Studies on problems of classification and structure.
- Surveys on methods and results of research based on labour market statistics.

Projects are concerned with:

- Medium and long term forecasts,
- Mobility and cyclical research,
- Sociology,
- Vocational research,
- Technology and industrial management,
- Statistics,
- Documentation and information.

Methods:

Own research; stimulation and commissioning of research projects; co-ordination of research (through membership of working groups and own initiatives); labour market statistics; documentation and information.

C. MAJOR RESEARCH PROJECTS CARRIED OUT IN 1969/70

C.1 *Investigation of the success of vocational continuation courses within the framework of the individual advancement programmes of the Federal Government*

Assignee: Institute for Written Questioning Technique, Munich

Concluded

C.2 *Analysis of ages and subject structure of persons with a completed course of study at a university*

Researcher: K. PARMENTIER

Completion: End of 1970

C.3 *Basic vocation and vocational basic training*

Researcher: H. FENGER

Completion: End of 1970

C.4 *Coverage analyses of instructional ordinance media*

Assignee: M. SCHMIEL, Department of Economic and Vocational Pedagogics,
University of Cologne

Completion: December 1970

C.5 *Analysis of development phases in technical novelties (innovation and diffusion terms)*

Researcher: M. LAHNER

Completed

C.6 *Innovation analysis of electronic data processing*

Researcher: E. ULRICH

Completion: 1970

C.7 *Technical development and the coming about of new vocations*

Researchers: M. LAHNER, E. ULRICH

Completed for the time being

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Handbook on the chances of employment training with a view to a specific vocation (Manual)*

Joint project of researchers of the Institute

Permanent project (first review end of 1972)

D.2 *Investigation of the needs for young people in Berlin up to 1980*

Researcher: L. REYHER

Completion: 1971-72

D.3 *School attendance quotas based on age and calculation of school leavers*

Researcher: V. GOTTSLEBEN

Permanent project

D.4 *Short-term labour market analysis and prognosis for the Federal Republic*

Researchers: W. HOFFMANN, J. KÜHL, L. REYHER, R. RIEFERS

Permanent project

D.5 *Investigation of training combination and the connections between training and vocation*

Researchers: H. HOFBAUER et al

Completion: Middle of 1971

D.6 *Success control of individual promotion in vocational continuation courses and rehabilitation*

Researchers: W. DADZIO, L. SCHUSTER

Completion: Uncertain

D.7 *Regional and vocational distribution of apprentices' places, school leavers and vocational beginners*

Researcher: F. STOOSS

Completion: 1971

D.8 *Special evaluation of vocational pupils - individual investigation in Baden-Württemberg in 1968*

Assignee: G. ROTHE, Institute for Instruction Content and Instruction Media Research at the Vocational Teachers' Training College, Stuttgart

Completion: 1971

D.9 *Staging and measuring of automation*

Researcher: E. ULRICH

Permanent project

D.10 *Automation and work situation structure*

Assignee: SIMON, Institute of Production Automation at the Technical University, Berlin

Completion: 1971

D.11 *Effects of technical innovations*

Researchers: M. LAHNER, E. ULRICH

Likely to be permanent

D.12 *Substitution analysis 'Engineers'*

Researcher: E. ULRICH

Completion: Uncertain

D.13 *Research documentation*

Researcher: G. PETERS

Permanent project with quarterly publications from November 1970 onwards

D.14 *Documentation and assessment of academics prognoses*

Researcher: V. GOTTSLEBEN

Permanent project

D.15 *Innovation documentation*

Researcher: E. ULRICH

Permanent project

D.16 *Switchover of the library system to electronic data processing*

Researcher: W. EICHNER

Completion: 1973

V. *Name of organisation:* DEUTSCHES INSTITUT FÜR INTERNATIONALE PÄDAGOGISCHE FORSCHUNG
(German Institute for International Educational Research)

Address: 6000 Frankfurt/Main, Schlossstrasse 29

Director: Professor Dr. Hasso von Recum
(Director of the research staff)

A. HISTORICAL

1. Year of foundation: 1951.

2. The Government of the State of Hesse, on a suggestion of the then Minister of Education, resolved to establish a "Higher Institute for Educational Science and International Research in Education". On a proposal of the "Society for Research in Education", which received considerable grants from US sources and financial and material help from the City of Frankfurt for this project, the "Higher Institute for International Research in Education" was founded by the State Government of Hesse as a foundation under public law.

At that time there existed no institute in Western Germany which was engaged in research in the field of education, and in teaching the methods of such research. The Institute did not limit its work to the fields that by German tradition are understood to be encompassed by pedagogics: it included law, administration and economics of education as well as sociology.

B. ORGANISATION AND PROGRAMME

1. The Institute is an independent foundation under public law. The foundation is supervised by the Hessian Minister of Education.

Supervision is limited to seeing that the laws and other legal regulations, as well as the statutes of the foundation, are not violated.

2. Directing, governing or advisory board: The foundation has a board of trustees (Kuratorium) which consists of representatives of the Hessian Ministries of Education and Finance, of educational research institutes in universities, of the German UNESCO Commission, of the USA and of the City of Frankfurt.

3. Research departments: There are at present the following six departments:

- General and comparative education, including school and social education, vocational education, documentation and information;
- Educational psychology;
- Sociology of education;
- Economics of education;
- Educational and sociological statistics, research on methods;
- Law and administration of education.

4. Staff

73 persons:	full-time	55
	part-time	18
	researchers	39

5. Total budget

1968	1,743,000 DM
1969	2,271,000 DM
1970	2,494,000 DM

Predominant source of finance: The Land Hesse and all other Laender under the so-called Königstein Agreement since 1963.

6. Further training of teachers: German and foreign teachers from all kinds of schools, school administrators, etc, are admissible as temporary research assistants. In general the temporary research assistants are detached by their authorities and receive their salaries and retain civil service status whilst working at the Institute. The Institute does not hold examinations or grant degrees.

7. Training of research personnel: The Institute participates in the scholarship programme of the "Stiftung Volkswagenwerk".

8. Programme and main fields of activity: The Institute promotes international research in education. For this purpose it has the following tasks:

- To engage in research, especially research in the areas of educational science and the system and practice of education, emphasising international comparison; to publish its results and make them available for improving instruction and education;
- To submit these results to the Standing Conference of Ministers of Education and to the educational administrations of the Laender for consideration;
- To promote further training of educational researchers and prepare persons for specific educational, administrative and supervisory tasks;
- To counsel and assist teachers and educationists, as well as public and private institutions engaged in research projects and the utilisation of such results, and to co-operate with other Germans, foreign and international educational agencies in comparative educational studies;
- To promote the theoretical and practical introduction to the methods of educational research.

C. MAJOR RESEARCH PROJECTS CARRIED OUT IN 1969-70

C.1 *Vergleichende internationale Leistungsuntersuchung* (Comparative international achievement investigation)

Responsible researchers: W. SCHULTZE, L. RIEMENSCHNEIDER

Number of research workers engaged in project: 5

Starting date: 1968

Completion date: 1970

Purpose: Assessment of pupils' achievement (dependent variables) by means of tests; ascertaining of independent variables by means of pupils', teachers' and school questionnaires.

C.2 *Englisch im dritten Schuljahr - Eine Dokumentation uber Schulversuche in der BRD, Frankreich, Schweden und der Tschechoslowakei* (English in the third school year - A documentary report on school experiments in the Federal Republic, France, Sweden and Czechoslovakia)

Researcher: G. GOMPF

Starting date: 1968

Probable completion date: 1970

Purpose: Comparative study of the organisation measures and of the methodical-didactic content of school experiments with English beginning in the third year of compulsory school.

Procedure: Interview, written questionnaire.

C.3 *Einstellung der Lehrer zu ihrem Beruf* (Attitude of the teachers to their profession)

Responsible researcher: H-J. NIEMANN

Number of research workers engaged in project: 4

Starting date: 1966

Probable completion date: 1970

Purpose: Ascertainment of teachers' attitudes to their profession (in particular job satisfaction, personal image of profession, relationship of the teacher to society).

Procedure: Analysis of factors, regression analysis, variance analysis.

C.4 *Der Einfluss von Mittelpunktschulen auf das Bildungsverhalten* (The influence of focal point schools on educational behaviour)

Researcher: A. BAUER

Starting date: 1968

Probable completion date: 1970

Purpose: Examination of the hypothesis that reserves of talent are mobilised through the establishment of focal point schools with a broad range of subjects.

Procedure: Progress statistics.

C.5 *Zur Soziologie der Teilnehmer am Fernunterricht* (The sociology of those participating in correspondence courses)

Researchers: H. KUSTERMANN, R. KLAUS-ROEDER

Starting date: 1964

Completion date: 1969

Purpose: Sociological pre-conditions for the further development of correspondence courses at the stage of a progressive institutionalisation of this type of instruction.

Procedure: Interview, written questionnaires; method based on correlation statistics.

C.6 *Der sozialökonomische Unterricht an Instituten zur Erlangung der Hochschulreife* (Socio-economic instruction at institutes where the university entrance qualification is obtained)

Researcher: H. WITTCHOW

Starting date: 1968

Probable completion date: 1970

Purpose: Investigation of content, form and aim of socio-economic teaching with regard to its educational effects for an understanding of society and economic policy.

Procedure: Interview, written questionniares; analysis of factors, analysis of variance, regression analysis.

C.7 *Welt- und Gesellschaftsbild von Berufsschülern* (The view of the world and society of vocational school pupils)

Researcher: E.A. SAARBOURG

Starting date: 1966

Completion date: 1969

Purpose: Ascertaining the pre-conditions for political instruction (civics) at technical colleges (colleges of further education) and vocational schools in the Federal Republic of Germany and in Switzerland.

Procedure: Written questionnaire; methods based on correlation statistics.

C.8 *Gesamtschul-Organisation* (Comprehensive school organisation)

Researcher: M. BERNHARD

Starting date: 1969

Probable completion date: 1970

Purpose: Investigation from the organisation-sociological viewpoint of the problems of comprehensive school management.

Procedure: Observation, interviews, group discussions, analyses of work sequence and place of work.

C.9 *Der Finanzbedarf eines expandierenden Vorschulsystems* (The financial requirements of an expanding pre-school system)

Researchers: H. von RECUM, P.A. DÖRING, G. SCHÖPPE

Starting date: 1968

Completion date: 1969

Purpose: Preliminary estimate of the financial requirements of an expanding pre-school system in the Federal Republic of Germany with alternative assumptions and possibilities for its coverage.

Procedure: Traditional prognosis methods; long-term prognosis model.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Die pädagogische Ausbildung für das Lehramt an höheren Schulen* (Pedagogic training for teaching at secondary schools)

Researcher: M. BAYER

Starting date: 1967

Probable completion date: 1971

Purpose: Comprehensive, empirical analysis of the training situation; development of a concept for a basic reorganisation of the pedagogic training of secondary school teachers (grammar schools).

Procedure: Interview, written questionnaire, data ascertainment.

D.2 *Untersuchung zu Fragen des evangelischen Religionsunterrichts* (Investigation of questions concerning Protestant religious instruction)

Responsible researcher: R. RAASCH

Number of research workers engaged in project: 6

Starting date: 1969

Probable completion date: 1972

Purpose: Ascertaining of conditions for the improvement of Protestant religious instruction.

Procedure: Combination of various enquiry techniques.

D.3 The New Social Studies *in den USA - ein Modell der Curriculum-entwicklung* (*The New Social Studies* in the USA - a model of curriculum development)

Researcher: C. WULF

Starting date: 1969

Probable completion date: 1971

Purpose: Study of the American approach and experience with regard to the curriculum of the New Social Studies. On this basis, conception of a model for curriculum developments in this field and formulation of hypotheses on the reform of the subjects concerned in the Federal Republic.

Procedure: Analysis of the New Social Studies curricula.

D.4 *Projekt Früheinschulung* (Project early start of schooling)

Responsible researcher: B. KRAAK

Number of research workers engaged in project: 6

Starting date: 1968

Probable completion date: Not yet determined

Purpose: Investigation of the effects of an early start of schooling on the children, especially on their intellectual development.

Procedure: Combination of various techniques of investigation.

D.5 *Begleituntersuchung zum Früheinschulungsprojekt des Landes Hessen* (Attendant investigation of the early start of schooling project of the Land Hesse)

Responsible researcher: U. RAATZ

Number of research workers engaged in project: 2

Starting date: 1968

Probable completion date: 1973

Purpose: Comparative investigation of the test and control groups from the standpoint of achievement differences, social barriers, etc.

Procedure: Combination of various enquiry techniques.

D.6 *Leistungsmessung in Gesamtschulen* (Achievement assessment in comprehensive schools)

Researcher: G. STARK (with assistants)

Starting date: 1969

Probable completion date: Not yet determined

Purpose: Development of grading and success tests; diagnosis of talent structures; empirical scrutiny of learning aims; concomitant research in schools of didactical problems.

Procedure: Combination of various enquiry techniques.

D.7 *Förderstufenprojekt* (Promotion stage project)

Responsible researcher: J. WENDELER

Number of research workers engaged in project: 2

Starting date: 1968

Probable completion date: 1972

Purpose: Comparison of traditionally organised and promotion stage school systems (comparison of longitudinal and cross sections).

Procedure: School performance tests.

D.8 *Bedeutung der Motorik für die Entwicklung behinderter Kinder* (Significance of motorics for the development of handicapped children)

Responsible researcher: D. EGGERT

Number of research workers engaged in project: 2

Starting date: 1969

Probable completion date: Not yet determined

Purpose: Differential diagnosis and therapy of intellectual impediments via the diagnosis of motoric development retardations and their correlations in the cognitive sphere.

Procedure: Development of a test battery on motorics and a motoric therapy programme with a view to a common model of motorics.

D.9 *Früherfassung von Behinderungen* (Early ascertainment of impediments)

Researcher: D. EGGERT

Starting date: 1969

Probable completion date: Not yet determined

Purpose: Early ascertainment (at the age of 3 or 4) of intellectual retardations with the purpose of early schooling for handicapped children.

Procedure: Working with American methods of early intelligence diagnostics and development of criteria-related procedures.

D.10 *Untersuchungen zur Entwicklung und zur Aussagekraft der Hirnstrombilder (EEG) von Kleinkindern* (Investigations into the development and the testifying power of electro-encephalogrammes (EEG) in the case of small children)

Responsible researcher: H. BARTENWERFER

Number of research workers engaged in project: 2

Starting date: 1969

Probable completion date: 1971

Purpose: Does the EEG show "brain maturing"? Are there interconnections between bodily and mental development characteristics?

Procedure: Correlation analysis.

D.11 *Wirkung schulpolitischer Massnahmen auf die Bildungsaffinität verschiedener Bevölkerungskreise* (Effect of measures of school policy on the educational affinity of various sections of the population)

Researcher: R. KLAUS-ROEDER

Starting date: 1967

Probable completion date: Not yet determined

Purpose: Study of the effects of a comprehensive school on the educational affinity of various sections of the population. Development of criteria for the establishment and propagation of comprehensive schools.

Procedure: Intensive interviews; methods based on correlation statistics.

D.12 *Organisation der Schulverwaltung* (Organisation of school administration)

Researcher: R. BESSOTH

Starting date: 1969

Probable completion date: 1972

Purpose: Empirical analysis of school administration from the standpoint of organisational sociology (organisational structure, motivation and attitudes of the school administrative staff); drafting of a reform model.

Procedure: Observation, interviews, group discussions, analyses of work sequence and place of work.

D.13 *Kostenrechnerische Analysen kameralistischer Budgets von Bildungseinrichtungen* (Cost accounting analyses of cameralistic budgets of educational institutions)

Researchers: P.A. DÖRING, H. KAHLERT, M. WEISS

Starting date: 1968

Probable completion date: 1970 (1972)

Purpose: Investigation of the applicability of instruments and hypotheses of economic management theory for the economic analysis of school expenditure data.

Procedure: Case studies, evaluation of accounting.

D.14 *Schullastenausgleich und föderative Bildungspolitik* (Equalisation of educational investments and federative educational policy)

Researcher: P.A. DÖRING

Starting date: 1967

Probable completion date: 1972

Purpose: Problems and criteria of a rational distribution of means for financing educational investments in a federatively organised state are to be enumerated or deduced respectively.

Procedure: Budget analysis, literature studies.

D.15 *Autonomie der Bildungsinstitutionen* (Autonomy of the educational institutions)

Researcher: H. HECKEL

Starting date: 1968

Probable completion date: Not yet determined

Purpose: Clarification and delineation of the autonomy of schools (in particular State schools) vis-a-vis State school supervision.

Procedure: No empirical investigation.

D.16 *Die Schule als Rechtsraum* (The legal aspects of the school)

Researcher: H. HECKEL

Starting date: 1968

Probable completion date: Not yet determined

Purpose: Clarification and delineation of legal conditions and reciprocal legal relationships of the groups of persons concerned in the school (in particular pupils, teachers, parents).

Procedure: No empirical investigation.

VI. *Name of organisation:* PÄDAGOGISCHE ARBEITSSTELLE DES DEUTSCHEN VOLKSHOCHSCHULVERBANDES
(Pedagogical Institute of the German Association of Adult Education Centres)

Address: 6 Frankfurt/Main, Eysseneckstrasse 6

Director: Dr. Hans Tietgens

A. HISTORICAL

1. Year of foundation: 1958.

2. Reasons for foundation: The need for research on the human conditions and social assumptions of adult education to draw consequences for didactics and techniques to improve the teaching-learning environment. The German Association of Adult Education Centres took the initiative in founding the Institute.

B. ORGANISATION AND PROGRAMME

1. Independent institute.

2. An advisory board serves as counselling body for research projects and discusses the draft budget. On the board are represented the Federal Government, the State of Hesse and the central bodies of local authorities.

3. No departments.

4. Staff in 1970

			Full-time	Part-time
Total:	17	thereof:	14	3
Researchers:			5	1

5. Total budget

1968	340,000 DM
1969	430,000 DM
1970	742,000 DM

Predominant source of finance: Federal Government.

6. Participation in teacher training: Introduction into the profession of full-time adult educators.

7. Programme: The purpose of the Institute is to develop a scientific basis of adult education.

C/D. MAJOR RESEARCH PROJECTS CARRIED OUT IN 1969-70 AND IN PROGRESS

D.1 *Volkshochschul-Zertifikat Mathematik* (The Volkshochschul-Certificate in mathematics)

Responsible researchers: von GAULS, G. HIRSCHMANN

Number of research workers engaged in project: 6

Starting date: 1969

Completion date: 1971

Purpose: Development of courses leading to certificates based on real performances.

Methods: Elaboration of a catalogue of educational objectives; development of examination models and diagnostic tests.

D.2 *Volkshochschulzertifikat Deutsch als Fremdsprache* (The Volkshochschul-Certificate German a foreign language)

Responsible researcher: H. STEGER

Number of research workers engaged in project: 7

Starting date: 1968

Completion date: 1971

Purpose: Development of courses leading to certificates based on real performances.

Methods: Elaboration of a basic vocabulary and of basic structures; development and trial of diagnostic and achievement tests.

D.3 *Volkshochschul-Zertifikat Spanisch* (The Volkshochschul-Certificate in Spanish)

Responsible researcher: A. BARRERA-VIDAL

Number of research workers engaged in project: 3

Starting date: 1969

Completion date: 1971

Purpose: Development of courses leading to certificates based on real performances.

Methods: Elaboration of a basic vocabulary and of basic structures; development and trial of diagnostic and achievement tests.

D.4 *Volkshochschul-Zertifikat Wirtschaftsenglisch* (The Volkshochschul-Certificate in English for business)

Responsible researchers: R. NOWACEK, H. HOFFMANN

Number of research workers engaged in project: 7

Starting date: 1970

Probable completion date: 1971-72

Purpose: Development of courses leading to certificates based on real performance.

Methods: Elaboration of a special vocabulary; development and trial of diagnostic and achievement tests.

D.5 *Volkshochschul-Zertifikat Elektrotechnik* (The Volkshochschul-Certificate in Electrical Engineering)

Responsible researcher: G. HIRSCHMANN

Number of research workers engaged inproject: 4

Starting date: 1969

Completion date: 1971

Purpose: Development of courses leading to certificates based on real performances.

Methods: Elaboration of a catalogue of educational objectives; development of examination models and diagnostic tests.

D.6 *Volkshochschul-Zertifikat Russisch* (The Volkshochschul-Certificate in Russian)

Responsible researchers: F. DENNINGHAUS, W. STEINBRECHT

Number of research workers engaged in project: 5

Starting date: 1969

Completion date: 1971

Purpose: Development of courses leading to certificates based on real performances.

Methods: Elaboration of a basic vocabulary and of basic structures; development and trial of diagnostic and achievement tests.

VII. *Name of organisation:* ARBEITSGRUPPE STANDORTFORSCHUNG AN DER TECHNISCHEN UNIVERSITÄT HANNOVER
(Institute of Urban and Regional Educational Planning at the Technical University of Hanover)

Address: 3000 Hannover, Weddigenufer 2

Directors: Prof.em. Dr.-Ing. E.h. Dipl.-Ing. Wilhelm Wortmann
Dr.-Ing. Clemens Geissler

A. HISTORICAL

1. Year of foundation: 1965.

2. Reasons that led to the foundation: Realisation of the inadequate structural data for the planning of schools and universities; absence of co-ordination in educational planning; necessity for improved regional development planning and municipal development planning. Preliminary work in this field had been done at the Institute for Town and Country Planning and Housing of the Technical University of Hanover.

The initiative for the foundation was taken by the two directors.

B. ORGANISATION AND PROGRAMME

1. Affiliated to the Technical University of Hanover as a university institute.

2. No directing, governing or advisory boards.

3. Research departments:

School planning - regional development planning;

University planning - regional development planning;

Educational facilities - municipal development planning;

System techniques - data processing;

Documentation - translation service;

Cartography - editorial work - reprotechniques.

4. Staff in 1970

		full-time	part-time
Total: 29	thereof:	20	9
Researchers: 20			

5. Total budget

1968	-
1969	513,000 DM
1970	820,000 DM

Predominant source of finance: Ministry of Education of Lower Saxony, in addition, project financing.

6. No participation in the initial and/or further training of teachers.

7. Participation in the training of educational research workers: As part of the duties of the teaching staff engaged at the Technical University of Hanover.

8. Main fields of research activity:

The task of the Institute is applied research and model development for the regional, infrastructural planning as part of municipal and rural development planning. The stress lies on research into "social and cultural services" in the infrastructural sphere. Educational facilities occupy the foreground here. This includes general and vocational schools and training facilities at all levels: pre-school facilities, schools, universities, centres of adult education.

The research work aims at supporting the co-ordination of school and university planning as well as educational and regional development planning. The goal is to establish bases for location planning and capacity determination and hence also for the building and financial planning connected with this.

The investigations are concerned with regions with varying structure and population density. Information and planning procedures for the regionally differentiated school and university planning areas are compiled in accordance with organisational models conceived on the basis of educational policy and educational science.

At the present time, there are three main fields of research:

- School planning, regional development planning;
- University planning, regional development planning;
- Educational facilities, municipal development planning.

Individual project groups deal with investigations which touch upon each other and complement each other, serving general basic research and scrutinizing research results in concrete planning cases. They are composed anew in each case for dealing with single research projects.

C. MAJOR RESEARCH PROJECTS CARRIED OUT IN 1969-70

C.1 *Regionale Schulversorgung und Standortwahl von Industriebetrieben*

(Empirical investigation of the reasons determining decisions on the location of industrial establishments in relation to the school facilities existing in the area)

Researcher: H. HOLZ

Duration: 1968-70

Purpose: Determination of the influence of the school situation of an area on the choice of location of enterprises.

Methods: Written interviews.

C.2 *Regionale Hochschulplanung in Hessen: Kassel als Universitätsstandort*

(Regional planning in Hesse: Kassel as the site of a university)

Researchers: E. BERGJOHANN, C. GEISSLER, D. LÖCHL

Duration: 1969 to October 1970

Purpose: Investigation of the need for a university at Kassel from the standpoint of improving the regional and general higher education system. Indication of the links between educational planning and regional development planning. Reasons for the suitability of Kassel as a university location. Consideration about the organisation and structural nature of a university at Kassel.

Methods: Analysis of the present structure and distribution of educational facilities in the region under review. Development of regionally differentiated prognosis models to estimate the likely prevalence of pupils and students. Development of location distribution models for the prognosis of future numbers of students at individual universities, in particular at Kassel.

C.3 *Einordnung einer Gesamthochschule in den Siedlungsraum Kassel* (Integration of a comprehensive university into the settlement area of Kassel)

Researchers: W. SCHRAMM, G. CASSING, K-H. COX, W. GROHS, H. HANSEN

Duration: March to October 1970

Purpose: Study of the demands made by a university on its location. Assessment of potential university locations within the Kassel settlement area with consideration paid to the requirements of a university and its population as well as to the special features of the Kassel settlement area and its development possibilities. Outline of possible interlacing of town and university.

Methods: Micro-location comparison on the basis of utilisation co-efficients and investigation of potential development of individual locations.

C.4 *Regionale Hochschulplanung im Land Rheinland-Pfalz: Trier als Universitätsstandort* (Regional planning in Rhineland-Palatinate: Trier as the site of a university)

Researchers: K-H. COX, C. GEISSLER, E. BERGJOHANN, H. HOLZ and collaborators

Duration: 1967-69

Purpose and methods: Similar to C.2.

C.5 *Einordnung einer Universität in den Siedlungsraum Trier* (Possibilities of integration of a university into the settlement area of Trier)

Researchers: K-H. COX, C. GEISSLER, W. GROHS, H. HOLZ, R. MUTSCHLER, W. SCHRAMM, W. WORTMANN

Duration: 1969-69

Purpose and methods: Similar to C.3.

C.6 *Oldenburg als Standort einer Universität* (Oldenburg as site of a university)

Researchers: W. GROHS, E. BERGJOHANN, C. GEISSLER, H. HOLZ, R. MACHOLD, R. MUTSCHLER, W. SCHRAMM, W. WORTMANN

Duration: 1968-69

Purpose and methods: Similar to C.2 and C.4.

C.7 *Wohnungsbedarf der Universität Bremen* (Demand of student places and residential accommodation for the planned university of Bremen)

Researchers: W. SCHRAMM, E. BERGJOHANN, J. ENGEL, C. GEISSLER, H. HOLZ, W. WORTMANN

Duration: 1968-69

Purpose: Assessment of number of students and staff of a university in the planning stage. Investigation of the accommodation market at Bremen. Development of a housing policy for a population and a corresponding planning process.

Methods: Empirical development of a planning model.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Systemplanung Schülertransport* (Systematic planning of pupil transportation)

Researchers: B. KIRFEL and collaborators

Duration: 1970-73

Purpose: Investigations of reasons and effects of geographical distance between home and school. Drafting of organisational models for pupils' transport systems.

Methods: Evaluation of literature and research findings; model construction.

D.2 *Bildungschancen und regionale Entwicklung in Ostfriesland* (Educational opportunities and regional development in East Friesland)

Researchers: H-J. BACK, B. KIRFEL, N. KULMSEE, R. MARTINSEN

Duration: 1969-71

Purpose: Compilation of structural and locational models (alternatives) for all types or stages of the educational system in East Friesland on the basis of criteria of educational and developmental policy. Special research into conditions prevailing with regard to routes between home and school and the utilisation of existing school facilities.

Methods: Empirical investigation.

D.3 *Analyse der Bildungsbeteiligung an Ingenieurschulen und Höheren Fachschulen. Grundlagen für die Standort- und Organisationsplanung* (Analysis of attendance at schools of engineering and colleges as a basis for planning location and organisation)

Researchers: R. MUTSCHLER and collaborators

Duration: 1969-71

Purpose: Investigation of mobility of students, regional and social differences in attendance, factors determining choice of study location and subjects, previous schooling and duration of the vocational activity of the students of engineering.

Determination of criteria influencing the choice of location in the specialised and general higher education spheres; development of a system of regional distribution of student prevalence; ascertainment of bases for student prognosis models.

Methods: Enquiry on the basis of individualised data.

D.4 *Regionale Bevölkerungsbewegung und Regionalplanung* (Regional mobility and regional planning)

Researcher: W. GROHS

Duration: 1969-71

Purpose: Investigation of the relationships between the migration of population, its structures and tendencies and selected intra-regional factors in a monocentric area with a predominantly agricultural structure.

Methods: Sectional analysis of mobility in a given area. Regional analysis of the housing market. Development of hypotheses, methods and measures to relate mobility and regional planning.

VIII. *Name of organisation:* ARBEITSGRUPPE FÜR EMPIRISCHE BILDUNGSFORSCHUNG (Working group for empirical educational research)

Address: 6900 Heidelberg, Zeppelinstrasse 151

Director: Professor Dr. Carl Christian von Weizsäcker

A. HISTORICAL

1. Year of foundation: 1967.

2. The necessity to develop a quantitative model of the school system in the Federal Republic in order to improve educational planning led to the foundation of the Institute for which the Director took the initiative and which was facilitated by the financial support of the Volkswagenwerk Foundation.

B. ORGANISATION AND PROGRAMME

1. The Institute is independent. The Director holds a professorship at the University of Heidelberg.

2. There is an advisory board of 21 members who represent educational research organisations, statistical offices and Ministries of Education.

3. The units in the Institute correspond to its main projects and research fields:

- structural research and electronic data processing;
- sociological and psychological research;
- adult education (recurrent education);
- university reforms;
- planning models.

4. Staff in 1970

		full-time	part-time
Total: 33	thereof:	22	11
Researchers:		16	2

5. Total budget

1968	885,900 DM
1969	1,117,300 DM
1970	1,291,500 DM

Predominant source of finance: Volkswagenwerk Foundation.

6/7. Staff members lecture to students at the University of Heidelberg on educational models, methods of planning, etc.

8. Main fields of research activity:

- development of quantitative models of the school system (structural and planning models);
- development of criteria for the reform of higher and adult education;
- improvement of available official statistics.

The Institute also carries out statistical surveys of its own.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Untersuchungen zur Struktur des baden-württembergischen Schulwesens* (Investigation of the structure of the school system in Baden-Württemberg)

Researchers: B. LAUER, W. PROESCHER, K. SCHWEIKERT, W. SUTTER, H. VOLLET

Starting date: 1967

Probable completion date: End of 1971

Purpose: Elaboration of transfer matrices for the school years 1966-67, 1967-68 and 1968-69.

Methods: Collection of individual statistical data by the Institute.

D.2 *Untersuchung der Determinanten des Übergangsverhaltens von Schülern* (Investigation of factors determining the educational choices of pupils)

Researchers: R. BAUR, A. JAEGER, R. SPITZMÜLLER

Starting date: 1967

Probable completion date: End of 1971

Purpose: To investigate the factors which determine the pupils', or their parents', choice of school.

Methods: Questionnaires have been sent to random samples of several thousand pupils, parents and teachers, weighted towards grades where educational choices have to be made.

D.3 *Beschreibung des Schulsystems der Bundesrepublik Deutschland (Schulinformationssystem)* (Description of the school system of the Federal Republic of Germany /School Information System/)

Researchers: B. LAUER, W. PROESCHER, K. SCHWEIKERT, W. SUTTER, H. VOLLET

Starting date: 1970

Probable completion date: 1972

Purpose: To advise the competent authorities on the establishment of a national school information system and on the co-ordination of the school information systems already existing in the various Laender.

Methods: The project is centred on classification problems and on the adequate description of new school types.

D.4 *Baukastengesamthochschule* (The integrated comprehensive university based on a units-credits system)

Researchers: G. KELLNER, I. KEHLER, E. von WEIZSÄCKER

Starting date: 1970

Probable completion date: 1972

Purpose: To test the hypotheses of the theoretical model elaborated by E. von Weizsäcker et alia /*Baukasten gegen Systemzwänge. Der Weizsäcker Hochschulplan*.- Serie Pieper, München 1970 (*A units-credits system as opposed to the restraints of the established system. The Weizsäcker Reform Plan*.- Pieper Editions, Munich 1970)/ and to examine its feasibility.

Methods: Initiation and evaluation of experiments. Simulation techniques.

D.5 *Planungsmodelle* (Planning models)

Researchers: W. KONRAD, H. KURTH, KWANG Uh Oh, W. SCHÖNFELDER,
H. STUMPF, G. VOSBERG, C.C. von WEIZSÄCKER

Starting date: 1969

Probable completion date of first model: 1971

Purpose: Elaboration of various planning models which will differ according to degree of aggregation and underlying hypotheses. The models will make it possible to ascertain the consequences of educational decision-making ie the consequences of various student numbers on the requirement of staff, facilities and finance.

Methods: Elaboration of model design; programmation of model; collection of necessary statistical data; simulation.

D.6 *Die Ausbreitung von Systemen der Erwachsenenbildung in der BRD. Probleme der Integration und Rationalisation* (The growth of adult-education-systems in the Federal Republic. Problems of integration and rationalisation)

Researchers: B. DIECKMANN, G. HOLZAPFEL

Starting date: 1971

Probable completion date: 1974

Purpose: Integration of primary, secondary and tertiary socialisation-systems, feed back and transfer-processes between general education, training on the job and political socialisation. Adaptation of adult-education-curricula to the needs of special groups.

Methods: Analysis of the structure of social subsystems, interviews, group-discussions.

IX. *Name of organisation:* INSTITUT FÜR DIE PÄDAGOGIK DER NATURWISSENSCHAFTEN (IPN)
(Institute for Education in the Natural Sciences)

Address: 23 Kiel, Olshausenstrasse 40-60

Director: Professor Dr. Karl Hecht

A. HISTORICAL

1. Year of foundation: 1966.

2. The reasons that led to the foundation of the Institute were the necessity to improve the teaching of the natural sciences. The initiative for its foundation were taken by the German Association of Scientific and Technical Societies and the Study Group for the Teaching of the Natural Sciences.

B. ORGANISATION AND PROGRAMME

1. The Institute is associated to the Faculty of Science of the University of Kiel.

2. The Institute is controlled by the Foundation for the Pedagogy of the Natural Sciences at Kiel which has been established by the

Volkswagenwerk Foundation. The foundation has a board of trustees consisting of 12 members: the Ministry of Education of the Land Schleswig-Holstein, represented by the head of the administration of the University of Kiel (chairman); the council of the University of Kiel; the faculty of science of the University of Kiel; the Standing Conference of Ministers of Education; the German Society for the Advancement of Teaching Mathematics and Sciences; scientists from the fields of physics, chemistry, biology, psychology, and theory of education.

3. There is one central department. There are research departments for physics, chemistry, biology, and theory of education.

4. Staff in 1970

			Full-time	Part-time
Total:	68	thereof:	65	5
Researchers:	33			

5. Total budget

1968	360,000 DM
1969	615,000 DM
1970	1,800,000 DM (estimated)

The salaries are included in these sums. The increase for 1970 is explained by the fact that the new building of the Institute was occupied (buying of furniture, etc) during that year.

Predominant source of finance: Foundation for the Pedagogy of the Natural Sciences at Kiel which itself is financed by the Volkswagenwerk Foundation.

6. Participation in the initial and/or further training of teachers:

The members of the Institute perform lectures and exercises. Additionally two courses a year are offered for post-graduate training of physics teachers; the same is intended for biology and chemistry. Furthermore, teachers are trained to use the curricula developed at the Institute. At irregular intervals seminars are organised, eg on the development and evaluation of tests.

7. Main fields of research activity:

Aims: Research and development of curricula for the teaching of the natural sciences; research on learning processes.

The curricula which are developed at the Institute are divided into units of teaching. Each unit deals with a special topic and comprises: didactical aids for the teacher; general instructions and special directions for each experiment; equipment for the demonstration experiments; tests, belonging to and developed exclusively for this unit of teaching, and instructions for evaluating them; working sheets for the pupils and equipment for pupils' experiments.

Field: Teaching of physics, chemistry, and biology at all types of schools for general education.

Methods: Co-operation of natural scientists, psychologists, and scientists of education with teachers in working groups. Empirical investigations of teaching, accompanied by the statistical evaluation of the observations of lessons and the development of tests.

C/D. MAJOR RESEARCH PROJECTS CARRIED OUT IN 1969-70 AND IN PROGRESS

The main research project is the co-ordinated and - as far as the topic allows it - integrated "IPN Curriculum of the Natural Sciences". Therefore the division into separate curricula on physics, chemistry and biology, which are described hereafter, is partly arbitrary; actually these curricula are closely connected.

C/D.1 *IPN physics curriculum for grades 5 to 8*

Responsible researchers: S. von AUFSCHNAITER, H. NIEDDERER

Number of research workers engaged in project: 8

Starting date: February 1968

Probable completion date: 1972

Purpose: Stepwise development of operationalised objectives, teaching methods, tests and other curriculum elements as a basis for research in science teaching.

Methods: Teaching units are being developed in co-operation with teachers of all types of schools. Research on test results is done by IPN project staff.

The IPN Physics Department is developing the Physics Curriculum in co-operation with teachers from all kinds of schools in Schleswig-Holstein. Part of the project results, ie a Physics Curriculum for grades 5 and 6, has been published by Klett-Verlag, Stuttgart. Planning of further curriculum has been completed up to grade 8.

6 teaching units, of approximately 8 lessons each, are being developed and tested in several subsequent trial runs. Cognitive tests are being used as to entrance abilities, learning successes and underlying perceptional structures of pupils. These investigations are aimed at analysing the learning processes.

C/D.2 *IPN chemistry curriculum for grades 5 and 6*

Responsible researcher: GAERTNER

Number of research workers engaged in project: 5

Starting date: June 1968

Probable completion date: 1972

Purpose: See above "physics".

Methods: See above "physics".

C/D.3 *Research and development of curricula for teaching chemistry for grades 9 to 11 of the grammar school*

Responsible researchers: WENINGER, DIERKS

Number of research workers engaged in project: 6

Starting date: February 1968

Probable completion date: 1973

Purpose: Development of a chemistry curriculum, which is an alternative to the commonly used method of teaching chemistry.

Methods: See above "physics".

C/D.4 *IPN biology curriculum for the lower grades (5 and up)*

Researchers: DYLLA, STANGE

Starting date: 1969

Probable completion date: 1972

C/D.5 *Cybernetical biology curriculum*

Researcher: SCHAEFER

Starting date: 1969

Probable completion date: 1972

C/D.6 *Ecosystems curriculum*

Researcher: SCHMIDT

Starting date: 1968

Probable completion date: 1970-71

Purpose of projects C/D. 4-6: Improvement of teaching biology according to the following criteria:

- social relevance,
- defining methods,
- taking into consideration of learning theories,
- objectivation of tests.

Methods: Development in the IPN, evaluation with a team of teachers in various kinds of schools and classes.

X. *Name of organisation:* STAATSINSTITUT FÜR BILDUNGSFORSCHUNG UND -PLANUNG (Bavarian Institute for Educational Planning and Research)

Address: 8000 München 22, Ludwigstrasse 16

Director: Professor Dr. Alfons Otto Schorb

A. HISTORICAL

1. Year of foundation: 1966; of coming into operation: 1968.

2. The task of constantly observing scientific, social and economic changes and their effects on the whole educational system and of preparing appropriate plans for education has become too great for one government agency. This task calls for an independent research organisation to prepare on a scientific basis long-term policies in co-operation with the Ministry and the schools.

The Bavarian Minister of Education and Culture in his budget speech to the Bavarian Parliament in 1966 initiated the foundation of the Institute.

B. ORGANISATION AND PROGRAMME

1. Independent scientific institute, directly connected with the Bavarian Ministry of Education and Culture. The Director of the Institute holds a professorship of education ("teaching principles") at the teacher training college, Munich, which is affiliated to the university.

2. The Institute is supervised by the Bavarian Ministry of Education and Culture.

3. Departments: Co-ordination Division; Research Division.

4. Staff in 1970

			Full-time	Part-time
Total:	24	thereof:	20	4 (researchers under contract)

thereof 14 researchers

5. Total budget

1969	600,000 DM	thereof 50,000 for research contracts
1970	770,000 DM	thereof 70,000 for research contracts

6. Main fields of activity:

- re-organisation of the educational system,
- curriculum research,
- research on regional educational developments,
- evaluation of statistics and literature,
- scientific evaluation of comprehensive school experiments.

C/D. MAIN RESEARCH PROJECTS CARRIED OUT IN 1969-70 AND IN PROGRESS

C/D.1 *Untersuchung der Bedingungen für die Verbesserung der schulischen Ausbildungsverhältnisse in einem Bundesausbaugebiet* (Pilot study on conditions necessary for the promotion of education in a Federal development area)

Researcher: RITTER

C/D.2 *Mittlere Abschlüsse im Bildungswesen* (Final examinations of lower secondary schools)

Researcher: SCHMIDBAUER

C/D.3 *Der Zusammenhang von Sozialstruktur und Bildungsstruktur in ausgewählten Landkreisen Bayerns* (Relationships between social structure and educational structure in special rural districts of Bavaria)

Researcher: RITTER

C/D.4 *Die Wirkung von Schulneugründungen auf die Schulverhältnisse eines Raumes* (The effect of the establishment of new schools on school conditions of a district)

Researcher: BITTNER

C/D.5 *Analyse der Volksschulneugliederung in einem bayrischen Regierungsbezirk* (Analysis of the re-organisation of the primary school in a Bavarian administrative district)

Researcher: MOLT

C/D.6 *Begleituntersuchung zum Aufbau der Hauptschule* (Scientific evaluation of the development of the secondary modern school /Hauptschule/)

Researchers: SCHORB, FRITZSCHE, NOWEY, PONADER

C/D.7 *Bestandsaufnahme der Erwachsenenbildung* (Stock taking of adult education)

Researcher: MEISTER

C/D.8 *Projektgruppe zur wissenschaftlichen Begleitung von Schulversuchen* (Study group for scientific evaluation of school experiments)

Researcher: D. KRYWALSKI

XI. *Name of organisation:* DEUTSCHES JUGENDINSTITUT (German Youth Institute)

Address: 8 München 13, Infanteriestrasse 13

Director: Professor Dr. Walther Hornstein

A. HISTORICAL

The Association of the German Youth Institute was founded in Munich on 27 April 1961. The Institute itself began its activities on 15 October 1963. The tasks of two older institutions have been absorbed in its assignment programme: the "German Youth Archive" (in Munich since 1949) and the "Study Office for Youth Questions" (established by the Federal Parliament in 1956 and since then active in Bonn).

B.

1. Status, finance, organisation

The work of the Institute is under the responsibility of a registered association. Its organs are the Members' Assembly and the director. According to the statutes in force since 1969, the Members' Assembly has 15 members (representatives of free and public youth welfare organisations and researchers). A director is appointed to deal with the work of the Institute (1958 Professor Dr. Holzamer, 1958-61 Professor Dr. Mieskes, 1964-66 Professor Dr. Küchenhoff, since 1967 Professor Dr. Hornstein).

The work of the Institute is financed predominantly from the funds of the Federal Youth Plan, with subsidies from the Laender.

The Institute has at present over 30 full-time collaborators (18 of them academic assistants).

2. Tasks

The purpose of the Institute is:

- To investigate the problems of child and youth development in the Federal Republic and - to a limited extent - abroad by means of international comparison;
- To study and give advice on problems of youth assistance:
  - . institutions and policies of free and public youth welfare; educational guidance, open and closed forms of remedial education, measures in connection with anti-social behaviour of youth;
  - . youth work: out-of-school youth education in organised and "open" forms, in particular civic education, international encounters, social services, youth protection, youth leisure-time centres, youth vocational guidance;
- To study and give advice on problems of youth policy (youth legislation, Federal Youth Plan).

3. Activities

In the fields mentioned, the Institute is active in the following ways:

- By collecting, critically reviewing and elaborating documentary reports on scientific publications with a practical orientation;
- By evaluating this material for the purposes of youth policy (by means of reports, recommendations, comments);
- By stimulating, financing and promoting studies and research projects in the fields mentioned;
- By carrying out its own research projects;

- By advising organisations, authorities, Federal and Laender ministries on questions of youth assistance and youth policy.

Research activities of the Institute dealt in particular with the following problems between 1964 and 1970: Educational advisory offices in the Federal Republic, Youth Labour Protection Law, International Youth Encounters, organisation and efficacy of Protestant youth work, life planning and life shaping of young workers, home education and youth leisure-time centres. Moreover, the Institute has implemented a series of surveys in connection with the First, Second and Third Youth Reports of the Federal Government.

Priority in the work of the Institute since 1967 was given to problems concerning female youth, questions of socio-political education, problems of therapy with children and adolescents and questions of infant pedagogics.

The Institute works on an interdisciplinary basis, but deals primarily with sociological problems.

C/D. EDUCATIONAL RESEARCH ACTIVITIES

In the field of educational research the Institute carries out projects which are concerned with pre-school education and a number of other projects which resulted from its general activities in youth research.

The pre-school education projects

The Land Rhineland-Palatinate, in the framework of its Ten-Year Educational Development Plan asked the Institute to advise it on the reform and expansion of its pre-school system. For this purpose the following projects have been launched which are co-ordinated by a working party for pre-school education:

1. Development of a basic educational programme to be tried out in model kindergartens;
2. Development of a system for the grouping of the three to five year olds;
3. Development of didactic materials for the pedagogic work in the kindergarten;
4. Development of instruments of observations for registering behaviour in the kindergarten;
5. Development and testing of a programme of continuous training for kindergarten teachers.

The Land Rhineland-Palatinate covers part of the costs of the projects. Lately the Land Hesse decided to participate in this programme which will lead to an expansion of the working party by the beginning of 1971.

OTHER EDUCATIONAL PROJECTS COMPLETED IN 1969-70 OR IN PROGRESS

1. *On the question of school achievement of accelerated young people*

   Researcher: R. PASCHLAU

2. *Children in homes with development disturbances*

   Researcher: Th. HELLBRÜGGE

3. *Organisation and methods of working of educational guidance offices*

   Researcher: A. TUCHELT
   Commissioned by the Scientific Committee of the Federal Conference for Educational Guidance

4. *Social group work and its role in the integration of endangered young people - Analysis of a socio-pedagogic model*

   Researcher: G. WURZBACHER

5. *On the situation in social work and in home education of adolescents taking up work*

   Researcher: C. BONDY

6. *Investigation of youth leisure time centres in the Federal Republic and in West Berlin*

   Researchers: C-L. FURCK, G. GRAUER, H. LÜDTKE

7. *Investigation of the role of youth groups in shaping the leisure time of young people*

   Researcher: KOB

8. *Vocational guidance, vocational promotion, vocational selection*

   Researcher: W. WITTE

9. *Leisure time and leisure time behaviour of young people*

   Researcher: K-G. SPECHT

10. *Causes of the premature school leaving of secondary school pupils*

Researcher: K-G. SPECHT

11. *Investigation of the significance of the biological daily rhythm*

Researcher: Th. HELLBRÜGGE

12. *Forms, media and contents of civics in the Federal Republic*

Researchers: MASER, WERNER

13. *Cross-sectional investigation into the development of physical efficiency and vocational maturity of working youth and schoolchildren*

Researcher: J. RUTENFRANZ

14. *Reasons for the failure of apprentices in final examinations*

Researcher: K-G. SPECHT

15. *The school and labour problems of children with development disturbances*

Researchers: G. BECKMANN, H. von BRACKEN

16. *Problems of education in homes*

Researchers: H. ROTH, M. BONHOEFFER

17. *Procedure and effect of guidance by educational guidance centres*

Researcher: E. DUHM

18. *Political education in society. Analysis of didactic materials for civics*

Researcher: W. REHM, Research Centre for Civics at the Weingarten Teacher Training College

XII. *Name of organisation:*	DEUTSCHES INSTITUT FÜR WISSENSCHAFTLICHE PÄDAGOGIK (German Institute for Scientific Pedagogy)
Address:	4400 Münster/West., Georgskommende 19
Directors:	Professor Dr. Josef Speck Professor Dr. Wilhelm Niggermann Diplom-Volkswirt Otto Kreis

A. HISTORICAL

1. Year of foundation: 1922.

2. The Association of Catholic Teachers in Germany and the Union of Catholic German Women-Teachers founded the Institute to promote Catholic pedagogics by scientific research.

B. ORGANISATION AND PROGRAMME

1. Independent institute.

2. A scientific advisory board offers counsel to the Institute with regard to selection of research projects; the members are specialists in the fields of pedagogy, philosophy, sociology, psychology and theology.

3. Research departments: There are departments for theoretical pedagogy, adult education, education of backward children, and economics of education.

4. Staff in 1970

			Full-time	Part-time
Total:	15	thereof:	13	2
Researchers:	9			

5. Total budget

1968	490,000 DM
1969	568,000 DM
1970	655,000 DM

Predominant source of finance: Catholic Church.

6. Participation in the further training of teachers: The Institute organises six week courses for teachers in elementary schools, vocational school and for workers in adult education.

7. Main fields of research activity: theoretical pedagogy, adult education.

C. MAJOR RESEARCH PROJECTS CARRIED OUT IN 1969-70

C.1 *Grundfragen der Geschlechtserziehung* (Basic questions in sex education)

Researchers: W. HARTMANN, R. MERKERT

Starting date: Summer 1968

Completion date: Summer 1969

Purpose: Study of the anthropological basis of an adequate sex education and of possible goals of sex education.

Procedure: Phenomenological inquiry and critical reflection of new directions.

C.2 *Curriculumforschung und Vorschulerziehung* (Curriculum research and pre-school education)

Researcher: W. HARTMANN

Starting date: Winter 1969-70

Completion date: Autumn 1970

Purpose: Investigation of contemporary theory and practice in both areas to develop a curricular framework aiming at "emancipatory education".

Procedure: Systematical critique and educational outline.

C.3 *Leistung, Erfolg und Erfolgskontrolle in der Pädagogik und ihren Nachbarwissenschaften* (Achievement, success and success control in pedagogics and other disciplines relevant to education)

Researchers: G. WEHLE, St. STRASSER, H.P. WIDMAIER, O. EWERT,
L. KEMMLER, P.M. ROEDER, R. WEISS, H. SCHOECK

Starting date: Spring 1968

Completion date: Spring 1969

Purpose: Study of the manifold problems of achievement and success.

Procedure: Empirical analysis and theoretical discussion.

C.4 *Zur pädagogischen Dimension von Psychologie, Soziologie und Geschichte* (About the relevance of psychology, sociology and history to education)

Researchers: F. WEINERT, R. WENZEL, W. RITZEL, H. BOKELMANN

Starting date: Spring 1968

Completion date: Autumn 1969

Purpose: The aim of the project is to contribute to: a psychological learning theory; a sociological theory of education - enculturation and socialisation; the meaning of historical pedagogics with regard to systematic education theories.

Procedure: Empirical investigation and critical reflection.

C.5 *Probleme der Curriculum-Forschung* (Problems of curriculum research)

Researchers: S.B. ROBINSOHN, D. KNAB, C. KUHLMANN, C. STRATMANN, G. LANGE, A. von CAMPENHAUSEN, E. KLUSEN, J. SAXLER, E. GROSS

Starting date: Spring 1969

Completion date: Winter 1969-70

Purpose: Introduction into theory and practice of curriculum development; presentation of curricular patterns for various subjects, ie economics, religion, arts and sciences.

Procedure: Empirical analysis and theoretical discussion of basic principles.

C.6 *Zur wissenschaftstheoretischen Begründung der Didaktik* (Towards a theoretical foundation of didactics)

Researchers: W. NICKLIS, W. SCHULZ, H. BLANKERTZ, J. RUHLOFF

Starting date: Spring 1968

Completion date: Spring 1969

Purpose: Determination of possibilities and limits of didactic theories.

Procedure: Critical reflection.

C.7 *Zur Problematik wissenschaftstheoretischer Voraussetzungen der Curriculum-Forschung* (About the problems of the theoretical pre-suppositions of curriculum research)

Researchers: Cl. MENZE, F. ACHTENHAGEN, W. HARTMANN, J.L. BLASS, W. BRAUN

Starting date: Autumn 1969

Completion date: Summer 1970

Purpose: Study of: the applicability of decision theories to curriculum development; the anthropological implications in curriculum research; the possibilities and limits of curriculum research.

Procedure: Critical analysis and reflection.

C.8 *Pädagogisches Heilen. Versuch einer erziehungsphilosophischen Grundlegung der Heilpädagogik* (About the basic concepts of educational help for handicapped children)

Researcher: J. LÖWISCH

Starting date: Spring 1968

Completion date: Autumn 1969

Purpose: Investigation of hitherto existing attempts to define the content and methods of "special education" and demonstration of new possibilities to base it upon educational philosophy.

Procedure: Critical analysis and theoretical reflection.

XIII. *Name of organisation:* DEUTSCHES INSTITUT FÜR BILDUNG UND WISSEN
(German Institute for Education)

Address: 479 Paderborn, Busdorfwall 16

Director of the Central Administration: Heinrich Janssen

A. HISTORICAL

1. Year of foundation: 1958.

2. The personal initiative of the founding members in co-operation with christian scholars and personalities in education led to the foundation of the Institute.

B. ORGANISATION AND PROGRAMME

1. Independent; corporation legally registered as being of public utility.

2. There is a governing board of seven members; both the catholic and the protestant churches are represented on the board.

3. Staff in 1970

			Full-time	Part-time
Total:	197	thereof:	2	195

Researchers: 45 of the part-time assistants are at present engaged in special projects

4. Total budget

1968	120,843.91 DM
1969	88,872.52 DM
1970 (estimated)	234,000.00 DM

Predominant source of finance: Private contributors, public grants for certain projects.

5. Participation in teacher training through the organisation of conferences and the publication of journals:

- Organisation of "Paderborner Hochschulwochen", with various themes treated in lectures, working-groups, etc; with an average attendance of 2,000 persons a day, the majority of whom being teachers;
- Publication of a monthly information service, a bi-monthly journal "Fragezeichen" (Question-Mark), discussing political issues in relation to education and culture, and a series of reports: "Grosse Reihe", Spee-Verlag, Trier; "Kleine Schriftenreihe", IBW-Verlag; "Incitamente", Spee-Verlag, Trier.

6. Main fields of activity:

- Working groups consisting of 10-15 scholars, scientists, and educators;
- Symposia of experts who are not members of the Institute;
- Scientific meetings of one week's duration with about 40 qualified participants.

C/D. MAJOR RESEARCH PROJECT CARRIED OUT IN 1969-70 AND/OR IN PROGRESS

Technokratie und Bildung (Technocracy and education)

Responsible researcher: H. STAUDINGER
(The function of co-ordination lies with the Central Administration of the Institute)

Number of research workers engaged in project: 17

Starting date: 1968

Completion date: 1971

Purpose: Present developments of educational activities in the Federal Republic of Germany are considered partly as an adaptation to political and social conditions as they do already exist, and partly as a preparation for certain desirable changes in the future. Besides, or even instead of, religious or philosophical concepts and orientations, these developments bring about structures which must be called technocratic. It seems urgently necessary to study the consequences which such innovations involve for education and culture in general.

Procedure: In the first instance some aspects of the project were treated separately. Thus, a conference was held in Berlin, in May 1968, on the theme "Cybernetics as a Challenge". A full report has been published in the Spee-Verlag. Lectures at the "Paderborner Hochschulwochen" both in 1968 (Man in the Modern World) and in 1970 (Freedom and Manipulation in the Modern World) discussed a great number of topics which were closely connected with the subject. The results of these lectures, seminars, etc, were collected and systematised by a small working group in Paderborn. - A lecture by Professor Dr. Staudinger "Future without Authority - Education between Humanism and Technocracy" can be considered as another contribution to the project. - The different activities and their results will be discussed and brought to a provisional conclusion at a conference planned in January 1971. Its working title will be "Technocracy and Education". - An overall summary of the project will then be elaborated by a small working group of experts.

XIV. *Name of organisation:* DEUTSCHES INSTITUT FÜR FERNSTUDIEN
(German Institute for Remote Studies)

Address: 74 Tübingen, Biesingerstrasse 26

Director: Professor Dr. Guenther Dohmen

A. HISTORICAL

1. Year of foundation: 1966; of coming into full operation: 1969.

2. The reform of higher education, especially the introduction of new media, led to the foundation of the Institute, which was initiated by the Volkswagenwerk Foundation.

B. ORGANISATION AND PROGRAMME

1. Independent institute.

2. An advisory board of 11 members has a consultative function as to didactical, methodological, and scientific problems of education.

3. Staff in 1970

			Full-time	Part-time
Total:	240	thereof:	100	140
Researchers:	60			

4. Total budget

1967-71	14,500,000 DM

5. The Institute participates in the further training of teachers by developing remote study courses.

6. Main fields of research activity are problems concerning the development of remote study courses. The Institute has a central advisory function regarding remote studies. Research projects on methodology and evaluation of remote studies by questionnaires, tests, and so on are being planned.

C/D. MAJOR RESEARCH PROJECTS CARRIED OUT IN 1969-70 AND/OR IN PROGRESS

D.1 *Techniques for planning priorities in multi-media remote study*

Responsible researcher: W. BIERFELDER

Number of research workers engaged in project: 3

Starting date: July 1970

Probable completion date: March 1971

Purpose: The subcommittee on priority problems which was created by the Standing Conference of Ministers of Education commissioned the Institute to undertake research on planning priorities in multi-media remote study. Emphasis will be on determining criteria for making decisions on such priorities.

Procedure: Questionnaires.

D.2 *An analysis of the drop-out in the remote study project mathematics ("Quadriga Broadcast College")*

Researcher: K.H. REBEL
The project will be carried out by a commercial social science research organisation

Starting date: October 1969

Probable completion date: March 1971

Purpose: The following questions will be examined: what was the correlation between the socio-economic factors, the educational background, and the motivation of successful, very successful, acceptable and unsuccessful students in this particular course?

Procedure: Questionnaires, analysis, correlation.

D.3 *The function of teaching texts in multi-media study*

Responsible researcher: H. HOFFBAUER

Number of research workers engaged in project: 3

Starting date: March 1970

Probable completion date: May 1971

Purpose: A research follow-up on the Broadcast College course on educational research. Collection, treatment, and interpretation of data.

Procedure: Questionnaires, correlation.

D.4 *Analysis of the demand among teachers in Baden-Württemberg for remote study courses*

Responsible researchers: W. BIERFELDER, K.H. REBEL

Number of research workers engaged in project: 4, and a commercial organisation

Starting date: January 1969

Probable completion date: March 1971

Purpose: An identification of the interests and motivation for further training of teachers in Baden-Württemberg. A key point will be to discover the number of potential participants in courses.

Procedure: Questionnaires, correlation.

XV. *Name of organisation:* DEUTSCHER BILDUNGSRAT
(German Education Council)

Address: 53 Bonn - Bad Godesberg, Mirbachstrasse 7

Chairman: Professor Dr. Karl Dietrich Erdmann

Secretary-General: Dr. Franz Letzelter

A. HISTORICAL

1. Year of foundation: 1965.

2. The need for long-term planning of the whole education system as a result of educational expansion and accelerated change led to the foundation of the German Education Council, the task of which is to draft recommendations for the development and reform of education.

The Council has been founded by an agreement between the Laender Governments and the Federal Government. The agreement was concluded on 15 July 1965 for an initial period of five years. On 12 February 1970 it has been extended for another five years, ie to 15 July 1975.

B. ORGANISATION AND PROGRAMME

The agreement stipulates that the Council shall consist of an Educational Committee and a Governmental Committee. The German Education Council published at the end of its initial period the "Strukturplan für das Bildungswesen" (recommendations for the future structure of the education system). The plan had been passed by the Council's Educational Committee at its 27th meeting, held on 13 February 1970. This plan was preceded by recommendations passed by the Educational Committee concerning special aspects and fields of the education system, ie financing of education, experiments with whole-day and comprehensive schools, teacher demand in mathematics and natural sciences, school building etc.

The Educational Committee decided to set up the following subcommittees for its second working period:

- Vocational education
- Further education
- Administration and organisation in education
- Special pedagogics.

The Educational Committee further set up working parties on elementary education and educational research.

The working party Educational Research is chaired by Professor Dr. Roth. Its task is to draft recommendations for promoting educational research in the Federal Republic of Germany and in particular to propose a priority programme.

In 1969 the Deutscher Bildungsrat had available DM 115,000 for commissioning advisory reports and studies.

C. MAJOR RESEARCH PROJECTS CARRIED OUT IN 1969-70

C.1 *Rekrutierung und Bildungschancen der Absolventen von Ingenieurschulen* (Recruiting and educational chances of graduates from engineering schools)

D. GOLDSCHMIDT

Volume 10 of the series, "Reports and Studies of the Educational Committee", Klett Verlag, Stuttgart

C.2 *Zur Situation der Lehrlingsausbildung* (On the situation of apprentices' training)

Volume 11 of the series, "Reports and Studies of the Educational Committee" (1970); it contains the following reports:

W.D. WINTERHAGER: Criteria for investigating the quality of apprentices' conditions

W. GREVENS: Proposals for improving educational statistics

W.D. WINTERHAGER: Bibliographical material on apprentices' training

B. LUTZ: Prognoses of vocational structure - methods and results (international survey of comparable societies)

C.3 *Lernziele der Gesamtschule* (Learning aims of the comprehensive school)

Volume 12 of the series, "Reports and Studies of the Educational Committee" (1969)

Contains the following reports:

H. von HENTIG: General learning aims of the comprehensive school

W. EDELSTEIN and W. SCHÄFER: Instructional aims of language teaching in the differentiated comprehensive school

H. GIESECKE: Teaching aims in civics instruction in the differentiated comprehensive school

G. GROTH: Teaching aims in labour theory lessons in the differentiated comprehensive school

B. HASSENSTEIN and U. BECKSMANN: Teaching aims in the natural sciences in the differentiated comprehensive school

W. JUNG: Teaching aims in mathematics instruction in the differentiated comprehensive school

H. THOMAS: An international comparison of the problems of differentiation in comprehensive schools

C.4 *Rechtsfragen der Gesamtschule* and *Lehrer-und Raumbedarf in Gesamtschulen* (Legal questions concerning the comprehensive school, and Teacher and space requirements in comprehensive schools)

Volume 13 of the series, "Reports and Studies of the Educational Committee", (1970)

Contains the following reports:

H. HARNISCHFEGER and G. HEIMANN: Legal Questions concerning the comprehensive school

P. SIEWERT: Space and teacher requirements in comprehensive schools

C.5 *Öffentliche Verantwortung für berufliche Bildung* (Public responsibility for vocational training)

I. RICHTER

Volume 14 of the series, "Reports and Studies of the Educational Commission", (1970)

C.6 *Finanzierungsalternativen der beruflichen Aus- und Weiterbildung* (Financing alternatives of vocational training and continuation courses)

A. OBERHAUSER

Volume 15 of the series, "Reports and Studies of the Educational Commission", (1970) C.7 *Materialien und Analysen zum Fachschulbereich* (Materials and analyses concerning technical colleges)

Volume 16 of the series, "Reports and Studies of the Educational Committee", (1970)

Contains the following reports:

M. SCHMIEL: On the situation and further development of technical colleges in rural education

M. SCHMIEL: On the situation and further development of technical colleges for craftsmen

H. HERMSEN: On the situation in the training of nursing assistants and in the nursing profession

G. GRÜNER: The training of technical assistants in the Federal Republic of Germany

E. VOLK: The technical schools in the Federal Republic of Germany

C.8 *Materialien und Dokumente zur Lehrerbildung* (Materials and documents on teacher training)

Editor: B. HANSSLER

Volume 17 of the series, "Reports and Studies of the Educational Committee", (1970)

XVI. *Name of organisation:* DEUTSCHE FORSCHUNGSGEMEINSCHAFT (German Research Association)

Address: 53 Bonn - Bad Godesberg, Kennedyallee 40

Chairman: Professor Dr. Julius Speer

The Association was founded in 1951. Its functions are defined in its Statute as follows:

> "The German Research Association promotes all fields of science by providing financial support for research projects and encouraging co-operation among researchers. It advises parliaments and public authorities on scientific matters and helps research institutes and their researchers to establish and maintain contacts with their counterparts in industry and in other countries. It devotes special attention to the training of young research workers."

The educational research projects to which the Association in 1969 and 1970 gave financial assistance (material aids, grants and/or research scholarships, printing costs) are listed below.

1969

Nature of assistance: Material aids

1. *Sozialpädagogische Einrichtungen, Erziehungsmassnahmen und Hilfen für Kinder und Jugendliche, die in persönlichen und sozialen Schwierigkeiten stehen* (Socio-pedagogic institutions, educational measures and aids for children and young people, who are in personal and social difficulties)

   Researcher: A. FLITNER

2. *Historisch-kritische Ausgabe der Werke von A.S. Makarenko* (Historical-critical edition of works by A.S. Makarenko)

   Researcher: L. FROESE

3. *Veränderungsmöglichkeiten der Erziehungspraxis von Eltern* (Possibilities for changing the educational practice of parents)

   Researcher: C-L. FURCK

4. *Orientierungsreaktionen und selektive Aufmerksamkeit bei unruhigen verhaltensschwierigen Kindern auf der Basis von EEG-Kriterien* (Orientation reactions and selective attention in the case of restless, difficult children on the basis of EEG criteria)

   Researcher: G. GRÜNEWALD

5. *Entwicklungs- und Motivationspsychologie - Soziales Lernen und die Entwicklung der Leistungsmotivation* (Development and motivation psychology - social learning and the development of performance motivation)

   Researcher: H. HECKHAUSEN

6. *Empirische Untersuchungen über Geltung und Wirkung des Grossen und Kleinen Latinums* (Empirical investigations of the validity and effect of the nine- or six-year course in Latin at the secondary school)

   Researcher: H. von HENTIG

7. *Erlebter Erziehungsstil der Eltern* (Experienced educational style of parents)

Researcher: Th. HERRMANN

8. *Das Fingeralphabet in der Gehörlosenschule* (The finger alphabet in the deaf school)

Researcher: H. JUSSEN

9. *Längsschnittuntersuchung vom ersten bis neunten Schuljahr einer Grupper 1960 eingeschulter Kinder* (Longitudinal investigation from the 1st to the 9th school year of a group of children who started school in 1960)

Researcher: L. KEMMLER

10. *Zur Psychologie des Lernens* (On the psychology of learning)

Researcher: W. METZGER

11. *Leistungsänderung und spezifische Leistungsstruktur bei lautem Verbalisieren unter Berücksichtigung der sozio-ökonomischen Schichtzugehörigkeit, des Geschlechts und des Aufgabentyps* (Performance change and specific performance structure in the case of verbalising aloud with consideration paid to socio-economic class, sex, and type of assignment)

Researcher: P.M. ROEDER

12. *Untersuchung des Lesenlernens bei Kindern im Vorschulalter* (Investigation into the learning to read of children of pre-school age)

Researcher: D. RÜDIGER

13. *Phonembestimmtes Manualsystem als Stütze lautsprachlicher Wissensvermittlung bei Sprachtauben* (Phonemic manual systems as a support for imparting sound language to the deaf)

Researcher: K. SCHULTE

Nature of assistance: Grants and/or research scholarships

14. *Das Kommunikationsfeld des Fernsehens als didaktisches Sytem* (The communication field of television as didactic system)

Researcher: D. BAACKE

15. *Vergleichende Analyse gesellschaftpolitischer Einstellungen und ausgewählter Persönlichkeitsmerkmale unterschiedlicher studentischer Gruppen und Gemeinschaften* (Comparative analysis of socio-political attitudes and selected personality characteristics of divergent student groups and communities)

Researcher: H. HARTMANN

16. *Die sozialpädagogische Problematik gesellschaftlicher Randgruppen* (The socio-pedagogic problematic of social fringe groups)

Researcher: G. IBEN

17. *Der Unterschied von Individuum und Person und seine Bedeutung für die Erziehung* (The difference between the individual and the *persona* and its significance for education)

Researcher: D. KAMPER

18. *Die Saarbrücker Rahmenvereinbarung, ihre Voraussetzungen und ihre Durchführung in den einzelnen Bundesländern* (The Saarbrücken Frame Agreement on the reform of upper secondary education, its prerequisites and its implementation in the individual Laender)

Researcher: I. SCHINDLER

19. *Schleiermachers "Theorie der Erziehung" in ihrer Bedeutung für die Grundlegung einer Erziehungslehre* (Schleiermacher's "Theory of Education" in its significance for educational theory)

Researcher: W. SCHMIED-KOWARZIK

20. *Erziehung und Bildung in der pluralistischen Gesellschaft* (Education in the pluralistic society)

Researcher: P. SPANGL

21. *Geltung und Einfluss der deutschen (bzw. westlichen) Pädagogik in der Türkei seit Atatürk* (Importance and influence of German /or western respectively/ pedagogics in Turkey since Ataturk)

Researcher: H. WIDMANN

22 *Rechtschreibfähigkeit und Rechtschreibtraining; empirische Untersuchungen im Volksschul- und Berufsschulalter* (Spelling ability and spelling training; empirical investigations at primary and vocational school age)

Researcher: W. WIECZERKOWSKI

23. *Elementarisierung und Festlegung von Teilzielen des Deutschunterrichts* (Elementarisation and fixation of partial aims for the teaching of German)

Researcher: G. WILKENDING

24. *Untersuchungen zur psychologischen Berufskunde des graphischen Gewerbes einerseits und betrieblichen Auslese und Förderung andererseits* (Investigation into the psychological vocational theory of the graphic trade on the one hand and business selection and promotion on the other)

Researcher: W. WITTE

Nature of assistance: Printing costs

25. *Zur Psychologie des phonetischen Verhaltens* (On the psychology of phonetic behaviour)

Researcher: S. ERTEL

26. *Begriff und Institution der Hochschulreife* (Concept and institution of university entrance qualification /Abitur/)

Researcher: K. HASEMANN

27. *Die Problematik der Jahrgangsklassen* (The problematic of classes by year groups)

Researcher: K. INGENKAMP

28. *Studien zur Wirkungsgeschichte Fichtes als Pädagoge* (Studies on the effectiveness of Fichte as an educationist)

Researcher: R. LASSAHN

29. *Beiträge zur Geschichte des naturwissenschaftlichen Unterrichts (17. - 19. Jahrhundert)* (Contributions to the history of natural science teaching /17th to 19th century/)

Researcher: W. SCHÖLER

1970

Nature of assistance: Material aids

1. *Der durchgängige padagogische Grundzug im Werk von Marx - Notwendige Klärungen über die Rolle von Marx in der pädagogischen Diskussion der Gegenwart* (Educational basic features throughout the work of Marx - necessary clarifications of the role of Marx in the present educational discussion)

Researcher: G. GROTH

2. *Entwicklung eines Intelligenztests für Blinde und Sehbehinderte* (Development of an intelligence test for the blind and those with sight disturbances)

Researcher: H. HORN

3. *Phonembestimmtes Manualsystem als Stütze lautsprachlicher Wissensvermittlung bei Sprachtauben* (Phonemic manual system as a support for imparting sound language to the deaf)

Researcher: K. SCHULTE

Nature of assistance: Grants and/or research scholarships

4. *Die sozialpädagogische Problematik gesellschaftlicher Randgruppen* (The socio-pedagogic problematic of social fringe groups)

Researcher: G. IBEN

5. *Der Unterschied von Individuum und Person und seine Bedeutung für die Erziehung* (The difference between individual and *persona* and its significance for education)

Researcher: D. KAMPER

6. *Der Beitrag der Mathematik zum gegenwärtigen Weltverständnis in seiner pädagogischen Bedeutung* (The contribution of mathematics to present day world understanding in its educational significance)

Researcher: K. PÜLLEN

7. *Operative Didaktik* (Operative didactics)

Researcher: H. AEBLI

8. *Entwicklung und Erprobung spezieller didaktischer Materialien zur Förderung geistig behinderter Kinder und Jugendlicher* (Development and testing of special didactic materials for the promotion of mentally retarded children and young people)

Researcher: Th. HOFMANN

9. *Berufliches Bildungswesen in den USA* (Vocational technical education in the USA)

Researcher: O. MONSHEIMER

XVII. *Name of organisation:* STIFTUNG VOLKSWAGENWERK
(Volkswagenwerk Foundation)

Address: 2 Hannover-Döhren, Kastanienallee 35

Secretary-General: Dr.-Ing.E.H. Dipl.-Ing. G. Gambke

1. The Volkswagenwerk Foundation was established by the Federal Government and the Government of the Land Niedersachsen in 1961. It is an incorporated foundation of common law. The Foundation has a governing board consisting of 14 members, seven are nominated by the Federal Government and seven by the Government of the Land Niedersachsen.

2. The function of the Foundation is to promote science and technology in teaching and research. The Foundation does not pursue any scientific or academic work itself, nor does it finance any research institutes of its own. Rather it confines itself to providing financial support for worthy institutions concerned with research and teaching, by grants for specific research projects, to stimulating, activating, and to a certain extent, organising research projects and meetings. Not only are the institutions of higher education, their institutes and seminars eligible for support but also scientific and academic societies and private research centres of a non-profitmaking character.

3. In recent years the Foundation has concentrated on the promotion of larger programmes concerned with the development of education, educational research, social sciences, bio-sciences and medicine.

4. The hitherto largest promotion programme of the Foundation aims at increasing the supply of teachers in mathematics and natural sciences at secondary schools. For this purpose the governing board made available a total sum of 75 million DM. It is destined for the training of students and probationary teachers aspiring to teach mathematics and natural sciences. Grants are bound to the readiness of candidates to serve as teachers at secondary schools for at least

four years after the second examination. Within the framework of the programme 5,068 fellowships have been granted (up to the winter semester 1968-69); 2,614 of which were given to students and 2,454 to probationary teachers.

The Foundation's educational programme is giving increasing importance to: improvement of instruction in mathematics and natural sciences at schools and universities, curriculum research and development in various fields, pedagogical psychology, new educational technologies, educational planning and economics of education. Finally, a special fellowship scheme "Educational sciences" aims at increasing the supply of educational researchers and thereby extending the manpower basis of educational research in the Federal Republic.

Financial assistance to the projects supported by the Volkswagenwerk Foundation is normally limited to a period of five years. The following list indicates the total grants given to individual programmes and projects in educational research and science teaching, for the promotion period beginning with the starting year.

5. List of promotion programmes and projects in the field of educational research and science teaching

Programme or promoted fields	Amounts granted in DM (millions)	Starting Year
New educational technologies	12,61	1964
Fellowships for future teachers of mathematics and science	75	1968
Institute for didactics of mathematics	9	1969
Chairs for didactics of mathematics and science	5	1969
Symposia on didactics of mathematics and science	2	1970
Working party teacher training in mathematics and science	0,3	1970
Planning of a test research institute	0,35	1969
Programme to promote tutorials in various subjects	12,0	1968
Tutorials in mathematics and science	4,0	1969
Post-graduate and doctoral fellowships	51,0	1963
Post-graduate and doctoral fellowships (second programme)	7	1968

Programme or promoted fields	Amounts granted in DM (millions)	Starting Year
Fellowships for educational researchers	3	1969
Various grants for educational research	4,55	1968
Project "Quantitative model of the educational system", Heidelberg	12,0	1966
Higher education data system	12,3	1968
Institute for education in the natural sciences at Kiel	15,4	1965
Curricula mathematics	6,5	1969
Curricula natural sciences	13,5	1969
Curricula socio-economic and technical education	5,0	1971
Curriculum primary education	5,0	1969
Promotion of new forms of university teaching	17,0	1969
Promotion of medical training	9,1	1963
Multi-media remote studies (Institute at Tübingen)	26	1966

Details on these programmes and projects are given in the Foundation's "Annual Report of 1969", chapters "Promotion of Science Teaching" (pp 28-31); "Reform of Science Teaching" (pp 31-36); "Educational Research" (pp 36-40).

XVIII. *Name of organisation:* SCHULBAUINSTITUT DER LÄNDER
(School Building Institute of the Laender)

Address: 1 Berlin 12, Strasse des 17. Juni 112,
Ernst Reuter-Haus

Director: Diploma Engineer Lothar Juckel, BDA

A. HISTORICAL

1. Year of foundation: 1964.

2. The growing school and school building problems in all the Laender led to the decision of the Standing Conference of Ministers of Education in 1962 to establish a school building institute to put the Conference in a position to make generally acceptable recommendations on school building procedures to the Laender and local government authorities.

B. ORGANISATION AND PROGRAMME

1. The School Building Institute is an institution of the Land Berlin, under the supervision of the Senator for Schools.

2. The Senator for Schools, in accordance with the foundatory decision, has convened a Council and permanent Working Committees to advise and support the Institute.

3. Departments:

- Administration,
- Programming Department,
- School Building Planning and Technological Department,
- Pedagogics Department,
- School Building Economics Department,
- Archive, Library.

4. Staff in 1970

Total: 8

5. Total budget

1968	750,440 DM
1969	776,580 DM
1970	798,510 DM

The Institute is financed jointly by all the Laender.

6. Participation in the initial and/or further training of teachers:

An indirect contribution to teacher training ensues from exhibitions, publications and lectures as well as from individual consultations for teachers.

7. Programme:

The School Building Institute has the task of carrying out research and development work in the following fields:

a) Basic questions of school building -
   Buildings for the various types and branches of school (elementary schools, special schools, intermediate schools, grammer schools, vocational schools, experimental schools, new forms of the Land school system).

b) Spatial groups of school building (class unit, permanent classes, specialised classes, workshops, communal rooms, gymnasia, administrative rooms etc).

c) Constructional principles of school building (one-storey, multi-storey, division into spatial groups, synopsis of spatial groups).

d) Organisation of free space (playground, sports areas, grass surface, gymnastics garden etc).

e) The school house in municipal planning.

f) Creative art and school building.

g) Investigation of school building costs (non-recurring and continuous).

h) Rationalisation (in particular, standardisation and building with prefabricated components).

For certain individual problems, research assignments are made, which are allotted to other institutes, firms or individuals.

C. MAJOR RESEARCH PROJECTS CARRIED OUT IN 1969-70

C.1 *School building guidelines: Draft of a school building ordinance*

Project directors: L. JUCKEL, K-H. KOCH

Starting date: 1968

Completion date: 1970

Purpose: Laying down of educational, technical and economic basic conditions, functional size units and technical standards for a school building ordinance, which will constitute a basis for the co-ordination of Laender guidelines and will be kept open for necessary amendments.

Procedure: Analytical evaluation of the existing guidelines for school building; measurements, evaluation of data, consultations with specialised bodies and Laender authorities.

C.2 *School building economics: Calculation of the long-term profitability of school buildings*

Project director: A. FUCHS

Starting date: 1968

Completion date: 1970

Purpose: Development of a cost planning method, which makes possible the calculation of the long-term profitability of school building investments.

Procedure: Evaluation of methods of dynamic profitability calculation developed within the theory of business economy with regard to their suitability for long-term, project-bound cost planning for school facilities; transformation of all the types of costs incurred during the period of existence of school buildings (building, running and maintenance costs) into a cost sum formulated in a unified manner (re-evaluation of the types of costs differing in the course of time by means of a discount factor) as the basis for the profitability comparison of alternative building drafts.

Bibliographical reference:

Methodische Beiträge zur Analyse und Planung der Bau-, Instandhaltungs- und Betriebskosten (Methodical contributions to the analysis and planning of building, maintenance and running costs) in *School Building Institute*, No. 28 and *School Building Studies* 9, 1970.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Programming of school building: Surface area standard investigation for primary and secondary schools*

Project directors: I-M. SANDVOSS, H. WEGELEBEN

Starting date: 1968

Probable completion date: 1970-71

Purpose: Development of standard space programmes for schools according to their function.

Procedure: Investigation based on pupil place and teaching situations. Evaluation of English, American and Scandinavian literature.

Bibliographical references:

Raumprogramm und Geschossflächenoptimierung für Sekundarschulen (Space programme and optimal usage of storey surface in secondary schools) in *Schul-Management,* October 1970, Georg Westermann Press, Brunswick.

Raumprogramm für Sekundarschulen (Space programme for secondary schools) in *Bauwelt 29,* 1969, Bertelsmann Specialised Press, Berlin.

D.2 *Restoration and utilisation of old school buildings*

Projects: Secondary School Berlin-Kreuzberg and
Specialised vocational schools of the Lette-Verein in Berlin

Project directors: G. FRIEDL, Th. SCHRÖDER

Starting date: 1969

Probable completion date: 1971-72

Purpose: Utilisation of old school buildings for new forms of teaching.

Procedure: Location investigation; - Drawing up of a pedagogic concept; - Programming and compilation of a space programme; - Ascertainment of the restoration and reconstruction merit of the school building; - Compilation of draft alternatives; - Estimate of costs.

Bibliographical references:

Aus alt mach neu (Make new out of old) in *betrifft erziehung* 3, 1970, Julius Beltz, Weinheim, Berlin, Basle.

Nutzungsänderung von Schul-Altbauten (Utilisation change of old school buildings) in *Bauwelt 36,* 1970, Bertelsmann Specialised Press, Berlin.

D.3 *Ascertainment of cost guidelines for the Land of Lower Saxony*

Project director: N. RAUCH

Starting date: 1969

Probable completion date: 1971

Purpose: Ascertainment of cost guidelines. Regression analyses to clarify the relationships between various types of rooms and the costs caused by them.

Procedure: Investigation of statistical sample. Calculation of the intermediate coefficients and the variance or the standard deviation respectively.

Bibliographical reference:

Preliminary results were published in *School Building Studies* 13, 1969.

D.4 *Development of district education plans as part of the school development plan of Berlin*

Project directors: LASER, KOCH

Number of assistants: 7-10

Starting date: 1968

Probable completion date: 1971-72

Purpose: Drawing up of pilot studies for programming and planning of school buildings in the districts of Wedding and Tiergarten in Berlin.

Procedure: Evaluation of statistical findings; - Ascertainment of characteristics for single school locations and buildings; - Investigation of socio-spatial facts; - Structure and locations from standpoint of municipal planning; - Study of social structure of the school population.

XIX. *Name of organisation:*

- ZENTRALARCHIV FÜR HOCHSCHULBAU (Central Archives for University Building)
- INSTITUT FÜR HOCHSCHULBAU (Institute for University Building)
- SONDERFORSCHUNGSBEREICH 63 HOCHSCHULBAU (SFB 63) (Special Research Sector 63 University Building [SFB 63])

Address: 7000 Stuttgart, Ossiestzkystrasse 4

Director: Professor Dr. h.c. Horst Linde

A. HISTORICAL

1. Year of foundation: 1962.

2. In the early sixties an urgent demand for a central institute of documentation and research on university building had evolved. On the initiative of the Standing Conference of Ministers of Education the Institute was established together with the professorial chair for university building in the University of Stuttgart.

3. In 1969 the German Research Association founded the Special Research Sector 63 (SFB 63) which is composed of the following six organisations:

- Institute for University Building, part of Stuttgart University,
- Institute for School Building, part of Stuttgart University,
- Centre for New Teaching Methods, part of Tübingen University,
- Department of Educational Sciences, part of Constance University,
- Institute for Medical Statistics and Documentation, part of Ulm University,
- Planning Group for the Building of Institutes, part of the University Building Authority of Karlsruhe.

SFB 63 carries out and/or promotes research and development work in the field of planning for university building.

B. ORGANISATION AND PROGRAMME

1. The Central Archives for University Building are loosely connected with Stuttgart University.

The Institute for University Building is part of the University of Stuttgart.

The Director of these two organisations and of SFB 63 holds a professorial chair in the University of Stuttgart.

2. Governing boards: The Central Archives for University Building has an Advisory Council consisting of one member each appointed by the Standing Conference of Ministers of Education, by the Building Authorities of the Laender, and the Science Council (Wissenschaftsrat). The Council appoints the members of the Study Group and may give directives for their work.

The activities of the SFB 63 are supervised annually by the German Research Association which has set up a group of experts for this purpose. The same group proposes what funds should be granted for the future work by the German Research Association.

3. The Central Archives are organised according to Study Groups and Sections. There are at present the following Study Groups:

- Physical and Overall Planning,
- Standard Cost Values,
- Medical Research- and Teaching-Centres,
- Technology of Building,
- Assessment of User Needs.

Furthermore there are the following sections:

- Documentation,
- Library,
- Archives, Publications.

The SFB 63 is organised according to research projects (see below).

4. Staff

	Full-time	Part-time
Central Archives		
Total	20	3
Researchers	9	-
Institute		
Total	10	5
	7	-
SFB 63		
Total	46	25
Researchers	30	-

5. Budget

	1968	1969	1970
Central Archives	355,000 DM	655,000 DM	717,000 DM
Institute	10,300 DM	11,000 DM	11,000 DM
	5,000 DM	1,500 DM	1,000 DM
SFB 63	-	93,000 DM	1,500,000 DM

The funds are provided for the Central Archives, in equal parts, by the Laender and the Federal Ministry of Education and Science, for the Institute by the University of Stuttgart, and for the SFB 63 by the German Research Association.

6. Programme and main activities:

Central Archives for University Building

- Collection of all building records on university buildings completed since 1960, now under construction, or planned in the Federal Republic, including West Berlin. So far as university buildings in foreign countries are comparable with corresponding German ones, records of these are also being procured. Particular attention is paid to the collection of space need programmes, requirements plans for staff needs with regard to equipment and furniture, furthermore to surveys and charts, floor plans and sectional views or cross-sections, explanatory reports on physical building, to records on cost finding and cost determination, and to evaluative empirical reports.

- Interpretation of the records, as well as classification and evaluation of professional literature.

- Upon request, all State Building Authorities and University Administrations are supplied with the material desired by them, if at all possible. On the whole, information is given by supplying photostats of the plans of certain institutional buildings to the requesting body, together with any other available empirical material. At regular intervals, State Building Authorities and University Administrations are kept informed on all current material available at the Central Archives.

- Advice to State Building Authorities and University Administrations on request.

- Expert opinions on space need programmes and planning projects, if requested by the above authorities.

- Under the auspices of the Central Archives, special study groups may be set up, among others for

  . centralised university facilities (libraries, lecture halls, etc),

  . technical university equipment (heating, generation of electricity, storage, and deactivation of radio-active substances, etc),

  . clinics,

  . *questions of overall planning for universities.*

  The study groups' task consists in elaborating directives on the basis of the material collected and classified at the Central Archives.

Institute and SFB 63

- Investigation of the structural interrelationship between university, town and surroundings, and elaboration of principles for the coordination of town and university planning.

- Elaboration of methods for the calculation of requirements; setting up of quantitative standard values.

- Classificaton of all uses typical of the university under a number of space categories for planning, with the help of which university models may be converted into physical planning.

- Testing of methods for the planning of costs and elaboration of standard cost values for university building.

- Investigation of the effects of new educational technologies on the organisation of teaching and research and on the planning of university buildings.

- Elaboration of alternative models of building structures to suit various forms of university organisation and operation.

Furthermore the programme of SFB 63 includes the following objectives:

- To take over advisory functions in practical building matters;
- To examine the economic profitability and technical feasibility of recommendations concerning university building structures;
- To work out procedures for the acceleration of the planning process at all levels;
- To make transparent decider- and decision-structures in university planning and to take part in their improvement;
- To contribute to long-term university planning as well as to short-term measures to overcome the present lack of facilities for teaching and research.

C/D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Auxiliary facilities of the university*

Researchers: R. BECKER, P. DIETZE, G. HECKING, M. KNOCH, R. WEEBER

Starting date: 1969

Probable completion date: 1973

Purpose: Analysis of activities and spatial mobility of university population, communicaton and economic interrelationship university - town, decision processes in university planning.

Procedure: Time budget analysis, activity analysis, communication profiles, study of mobility, social research techniques, building model for the planning process, case study Medical Clinic Stuttgart.

D.2 *Methods for the determination of location (micro location)*

Researchers: H-J. AMINDE, J. PAMPE, B. REIFF

Starting date: 1970

Probable completion date: 1972

Purpose: Determination of space demand of the university and its various utilisation of land, taking into account the relationships and the integration of spatially distributed areas, depending on internal operations.

Procedure: Analysis and evaluation of micro locations' actual state, definition of operational units, optimal model, effectiveness analysis, employment of statistical analysis, construction of an ideal state of micro locations, formalisation of procedures for an estimate of area requirements, calculation of land demand, grouping programme for sites, determination of organisational units.

D.3 *Open space areas*

Researchers: G. ANDERS, H. HAHN, W. KRONER, C. LOHKAMP, P. SCHNEIDER, C. SIEGEL

Starting date: Spring 1969

Probable completion date: 1973

Purpose: Demand of open space areas by various teaching systems, physiological conditions as to construction of open space areas, possibilities for didactical school and university reform in open space areas.

Procedure: Empirical investigation of existing open space areas as to their usability for teaching (schools and universities), analyses of issues concerning open space areas from the point of view of building economics, physics in building, psychology and physiology, investigation of teaching experience in open spaces, analysis and determination of relevant trends in curricula and educational reform.

D.4 *Planning for research (analysis of research in university planning, drawing up of a research project file)*

Researchers: J. ACEVEDO, R. HAUG, S. HEEG, V. NIKOLIC

Starting date: 1970

Probable completion date: 1973

Purpose: Setting up of a research information system for the improvement of conditions of communication in university planning. Detection of disturbances in the system of university planning, analysis of present state of research in this field, definition of an ideal state, development of alternative possibilities of action, evaluation of alternatives.

Procedure: Empiric-analytical methods: techniques of empirical social research, assignment and assignee analysis; - Methods of presentation: documentation techniques, structure techniques, net plan technique (CPM or PERT methods); - Deductive methods: formation of hypotheses of ideal function of university planning, formulation of a model for research in university planning; - Synthetic development of procedures and aids (research project file).

D.5 *Thesaurus university planning*

Researchers: B. KOENGETER, U. LINDNER, H. STROHL-GOEBEL

Starting date: 1970

Probable completion date: 1973

Purpose: Drawing up of a thesaurus for a documentation and information system on university planning.

Procedure: Empiric-inductive: compilation of terms and definitions from the terminology of university planning; - Theoretic-deductive: development of a model of terms relative to university planning, development of a polyhierarchical system of terms; - Presentation: alphabetical thesaurus, faceted thesaurus.

D.6 *General methodology of requirement planning*

Researchers: U. HEMPEL, J. HIDASI, P. JOCKUSCH, H. SCHWAB,
G. SCHWANHÄUSER, H. SZABADOS, B. WEIDNER-RUSSELL

Starting date: 1966

Probable completion date: Cannot be stated

Purpose: Standard values and methods of requirement planning for general planning, land use planning, physical planning; simplification and acceleration of all steps in the planning process.

Procedure: Analysis of structure, organisation and operations within the university by way of empirical investigation of surveys, statistics, prognoses and recommendations from political institutions; developing methods and models of calculation for the assessment of the quantitative demand of usable area for all integrated or specific university facilities:

- obtaining and file maintenance of standard area values for the evaluation and checking of long-term planning;
- detailed assessment of demand in usable area as a basis for so-called "skeleton programmes";

Techniques: Two kinds of calculation models:

- the so-called "simple calculation model" showing the most typical structural data for working out rough estimates for long-term or medium-term planning (calculation by hand or by EDP, sensitivity tests by EDP);
- the so-called "interdependence model" (matrix calculus) for detailed estimates: physical planning dependent on specific local conditions (by EDP).

D.7 *Structural alternatives (comprehensive university)*

Researchers: M. KRONENWERTH, E. MÜLLER, P. MÜLLER, G. OSWALD, G. ROLLET

Starting date: 1970

Probable completion date: 1973

Purpose: Analysis of existing reform conceptions, investigation related to structure and model construction of a comprehensive university, analysis of planning and decision processes within the university system.

Procedure: Analysis of duration and interdependence of study courses, analysis of educational and didactic possibilities in the teaching organisation, analysis of forms of self-administration within a comprehensive university, plans for gradual integration in establishing a comprehensive university, analysis of the decision processes and information flows.

D.8 *Standard cost values - planning of costs*

Researchers: O. BÜTTNER, K. FUCHS, G. HARTMANN, T. HOFFMEISTER, H. KÜSGEN, N. KÜSGEN, C. RIEPL, H. THIEME

Starting date: 1966-67

Probable completion date: 1973

Purpose: Analysis of building cost resulting from certain planning decisions and market conditions. Development of standard cost values for master- and object-planning, strategy of cost planning, cost analysis of finished buildings.

Procedure: Analysis of cost regression (real estate, buildings, maintenance, etc), comparative cost analysis, development of a synthetic cost model, development of standard cost values for various time periods, setting up of a building cost file.

D.9 *Teaching organisation*

Researchers: K-H. FLECHSIG, P. METTLER, V. SCHMIDT

Starting date: 1970

Probable completion date: 1973

Purpose: Statistical survey and analysis of trends and reform models of the organisation of academic teaching performances for the purpose of rendering possible qualitatively differentiating university planning.

Procedure: Development of a typology of teaching organisations existing at present, compilation of empirical results by way of pilot- and prestudy, trend extrapolation, Delphi method, synthetic methods.

Development of a typology for the transformation of teaching organisation variables into room variables.

D.10 *EDP and information systems in university clinics*

Researchers: F.J. BURGDORF, W. von EIMEREN, H-K. SELBMANN, K. ÜBERLA

Starting date: 1970

Probable completion date: 1973

Purpose: Survey of solutions arrived at so far and EDP models at university clinics, setting-up of a structural and functional model for the application of EDP in university clinics, taking into account constructional and operational management aspects.

Procedure: Analysis of EDP solutions arrived at so far at university clinics, analysis of room and financial demand for the introduction of EDP, investigation of possible steps and strategies for the introduction of EDP, development of a structural and functional model for the introduction of EDP in university clinics, development of an economically relevant criterion for the evaluation of EDP in clinics.

D.11 *Media-related teaching technology*

Researchers: H.J. KRUMM, H. SIMON, W. ZIFREUND, U. ZIFREUND

Starting date: 1970

Probable completion date: 1973

Purpose: Investigation of the effects of the application of new educational technologies, programmed material, use of language laboratories etc in the university.

Procedure: Analysis of relevant international literature, study of relevant models at home and abroad, own experiments with such models, analysis of effects of new teaching technologies within the framework of a reform in university didactics, experiments with new media in class.

Special emphasis: experimental methods and field studies.

D.12 *Information facilities at university*

Researchers: H-D. LAUBINGER, R. NEEF

Starting date: 1970

Probable completion date: 1973

Purpose: Organisation of libraries in the university, new information media for the extension of existing facilities, technological possibilities offered for new information systems.

Procedure: Analysis of use of information facilities with the main emphasis on libraries, documentation of special subject fields, data banks, etc, gaining of information from consultants.

D.13 *Space categories*

Researchers: A. BARTKE, H.J. LENZ, M. NICOLAI, S. PFITZER

Starting date: 1966

Probable completion date: 1973

Purpose: Standardisation of space qualities relative to utilisation and zoning according to space qualities.

Procedure: Recording, selection and classification of constructional characteristics, defining of basic characteristic value combinations, statistical survey of the utilisation of teaching and research facilities, storage of collected data, selection of uses according to certain combinations of characteristics, classification of uses, analysis of work place systems.

D.14 *Provisional buildings*

Researchers: M. BÜCHE, E. DÜRRSCHNABEL, E. HEID, H. PASCHMANN, B. WENSCH

Starting date: 1970

Probable completion date: 1973

Purpose: Qualitative and quantitative demand for utilisation of provisional buildings, principles for the planning and erection of provisional buildings;

Examination of provisional buildings in relation to overall planning concepts of the university;

Comparison of cost.

Procedure: Investigation and interpretation regarding evaluation of existing records, examination of user claims and assessment of user needs, study of market offers as to systems for provisional building, further development of existing building systems, new development of optimal provisional buildings based on frame conditions; simulation of models.

I. EDUCATIONAL RESEARCH POLICY

A.1 Agencies which promote, co-ordinate and plan educational research

Educational research in the Netherlands is carried out mainly by university institutes and institutes linked to universities, that start certain of these activities on their own initiative. Apart from this, educational research is stimulated by the following institutions.

De Nederlandse Organisatie voor Zuiver-Wetenschappelijk Onderzoek, ZWO (Netherlands Organisation for Purely Scientific Research): Founded in 1950, the Organisation attempts to further the pursuit of science in the Netherlands, including more fundamental educational research, by extending financial support to research projects.

De Stichting voor onderzoek van het Onderwijs, SVO (Educational Research Foundation): Founded in 1965, the Foundation, in common with ZWO, does not carry out research itself. It originated as a result of the growing demand for scientific support of activities related to the advancement of developments in the field of education. SVO attempts to achieve its goal by supporting, commissioning, co-ordinating and generally promoting scientific research in the field of education.

The Ministry of Education and Science: The Department of Research and Planning is, apart from quantitative planning, concerned with study and research in relation to policy-making.

The Ministry of Culture, Recreation and Social Work, and *The Ministry of Social Affairs and National Health:* These Ministries occasionally subsidise the execution of certain parts of educational research projects.

A.2 Co-ordination of educational research projects

The SVO: In the endeavour to promote educational research the Foundation attempted during the first five years of its existence to stimulate co-ordination and co-operation in the executive field between the various projects through, amongst other things, the establishment of committees. Planning, programming and co-ordination of research and development work in the 4-16 age group is carried out at present.

CBOWO, Centraal Bureau voor Onderzoek van het Wetenschappelijk Onderwijs (Central Bureau for Research of Scientific Education): In the years 1965-70 in each of the 13 universities and colleges at university level, a bureau specialised in scientific educational research was established. These bureaux are under the direction of the Central Bureau, a body for the co-ordination of educational research in higher education and supervised by a committee of the Academic Council. The Academic Council is an organisation where all the universities and colleges at university level in the Netherlands are represented. Within the context of its supporting and co-ordinating function, the Bureau started to explore its field of activity by means of a situation analysis.

A.3 Finance

At present, there are two major sources of finance for the execution of educational research.

One comes via the university budgets and, for a small part, directly from the Ministries mentioned above, as well as from other sources. The other offers the opportunity to obtain financial support for research projects by means of subsidy from ZWO and SVO. These organisations receive an annual government grant with which to provide financial support for the execution of research projects.

A.4 A review of the total expenditure on educational research is not available, since a large part of this is included in the university budgets and since only part of the ZWO budget is spent on educational research.

The SVO received from the Government for the years 1969 and 1970 a contribution of respectively DFls. 2,700,000 and DFls. 6,500,000.

B. Priority fields

- Planning, programming and co-ordination of research and development work in the 4-16 age group: In concert with the Minister of Education and Sciences it was recently decided to give high priority to this work. The age group is sub-divided into three phases: 4-7 years, 7-11 years and 11-16 years. This decision was also taken in view of the highly necessary adaptation of the outdated Primary Education Act as well as the imperfect co-ordination and transition between pre-primary, primary and secondary education.

  Discussions on special measures to be taken to effect this priority are being held.

- Curriculum development: Various projects on curriculum research and development are being carried out by university institutes and committees established to conduct research and development work at the various educational levels or within the different subjects or age-groups.
- Education for the socially disadvantaged: A number of compensatory programmes for pre-school education are being developed.

- Community approach to educational problems: Development of alternative organisation models in co-operation with administrators (both at the national and the local level), teachers, parents and students.

- Research into the teaching/learning process: Exploration of interactions between elements of the instructional behaviour in the classroom and characteristics of teachers and students.

The flow of information

C.1 All social science research projects are listed in a regularly published register by the Registration Department for Current Research in Social

Sciences. This Department comes under the Social Science Council of the Royal Netherlands Academy of Sciences and Letters.

C.2 The Ministry of Education and Sciences is kept fully informed about current and completed research subsidised by SVO. Copies of all reports received are forwarded to the Ministry by the Foundation.

The Department of Research and Planning of the Ministry of Education and Sciences and the Division of Documentation play an important role in the provision of information on research and development activities in relation to the decision-making process at the national level.

C.3 The task of disseminating the results of research findings to the teachers in the classroom and of promoting feed-back from them to the researchers is carried out by three Pedagogical Centres subsidised by the Department of Education and Sciences.

Apart from these national centres, the regional and local school centres play an important part in this task. At the end of 1970 over 20 of these centres were operating and their number is still increasing. Co-operation and co-ordination are guaranteed by the representation of each of the centres in a National Working Group (Werkverband Plaatselijke en Regionale Onderwijsadviescentra, WPRO). These centres are mainly financed by the municipalities. However, it is the intention to provide for a national arrangement in the field of financing.

The SVO is in the process of establishing a documentation service for the preparation and dissemination of selected abstracts concerning research literature in the Dutch language. Discussions are going on regarding the preparation of reviews concerning urgent educational problems. Furthermore, an information bulletin on research, development and innovation in the field of education is issued.

D. New trends and measures

- With regard to the problem of the organisation of curriculum research and development, a Governmental Committee was established (Commissie Organisatie Leerplan Ontwikkeling, COLO), which published in 1970 a working paper designed to bring about a consensus of opinion on the measures necessary for the furtherance of research and development activities in curriculum innovation.

- More and more attention is being given to the problem of the link between research and development work and the national development policy on the one hand and innovation on the other.

- The Minister for Education and Sciences asked the SVO to advise him on the training of researchers and the Foundation decided to set up a committee to study this problem, both with regard to post-academic training of project leaders and the training of research workers at the secondary level.

- A permanent committee to study the planning of the higher education system has been formed by the Minister for Education and Sciences. The McKinsey bureau recently submitted a report on this problem.

  At the end of 1970 discussions at the national level were going on regarding:

  - The foundation of a national organisation for educational innovation policies in which the Government, school board organisations, teachers, parents and students will participate, and which will have links with the field of research, development and dissemination;
  - The extension of SVO into a national foundation for research, development and experiments;
  - The structuring of national and regional innovation activities.

II. ACTIVITIES OF EDUCATIONAL RESEARCH ORGANISATIONS

The data given in Part II have been collected by the Educational Research Foundation by means of questionnaires

Information has been included on research projects of the following organisations:

University of Amsterdam

I. Teacher Training Department of the Pedagogico-didactical Institute

II. Department of Developmental Psychology

III. Psychological Laboratory, Department for the Training of Adult Educators

IV. Sociological Seminary, Faculty of Social Sciences

V. Kohnstamm Institute for Educational Research

Free University, Amsterdam

VI. Psychological Research Laboratory

VII. Laboratory for Psychodiagnostic and Industrial Psychological Research

VIII. Department of Conflict Studies, Sub-Faculty of Psychology

IX. Department of Research into Higher Education

State University of Groningen

X. Institute of Education

XI. Institute of Special Education

State University of Leyden

XII. Pedagogical Institute

XIII. Institute of Psychology

XIV. Department of School Psychology

XV. Educational Research Centre

Catholic University of Nijmegen

XVI. Institute of Education of the Sub-Faculty of Pedagogy

XVII. Institute of Special Education

XVIII. Teacher Training Department of the Educational Institute

XIX. Psychological Laboratory

XX. Centre for Research into Higher Education

State University of Utrecht

XXI. Psychological Laboratory

XXII. Institute of Clinical and Industrial Psychology

XXIII. Educational Research and Development Section

XXIV. Institute of Applied Linguistics

Technological University of Delft

XXV. Educational Research Working Group

Technological University of Eindhoven

XXVI. Educational Research Group

Technological University of Twente

XXVII. Centre for Educational Research and Development

XXVIII. Netherlands Universities' Joint Social Research Centre, Amsterdam

XXIX. Central Planning Bureau, The Hague

XXX. Netherlands Central Bureau of Statistics, The Hague

XXXI. National Employment Service, Division for Vocational Guidance, Research Office, Leidschendam

XXXII. Municipal Institute for Educational Therapy, Amsterdam

XXXIII. Nijmegen Institute for Educational Research

XXXIV. Foundation Research Institute for Learning Difficulties, Utrecht

XXXV. Working Group Empirical Introduction, Amsterdam

XXXVI. Pedagogical Centre of the Municipality of Enschede

XXXVII. Foundation for Research on Children with Learning and Educational Difficulties, Groningen

XXXVIII. Protestant Pedagogical Study Centre, Hoevelaken

XXXIX. Foundation Working Group, Student Research, Rotterdam

XL. National Foundation of School for Young Workers, Utrecht

I. *Name of organisation:* PEDAGOGISCH-DIDACTISCH INSTITUUT, AFDELING LERAARSOPLEIDING DER UNIVERSITEIT VAN AMSTERDAM (Teacher Training Department of the Pedagogico-didactical Institute, University of Amsterdam)

Address: Prinsengracht 225-227, Amsterdam-C

Director: Professor Dr. J. Koning

A. HISTORICAL

1. Year of foundation: 1964.

2. An increase in the activities of the Pedagogico-didactical Institute led to the foundation of the Teacher Training Department.

3. It was founded on the initiative of Professor Dr. H.W.F. Stellwag.

B. STATUS AND PROGRAMME

1. The Teacher Training Department is part of the Pedagogico-didactical Institute and has the same Governing Board. All financial matters are arranged by the Institute.

2. The Governing Board consists of a professor and two scientific assistants. Its function is administrative and executive.

3. The Department has no formal divisions, sections, etc.

4. There are 19 members of staff.

5. Predominant source of finance: the university budget.

6. The Department conducts courses for university teachers, and gives guidance to groups of secondary school teachers.

7. The Department does not participate in the training of educational research workers.

D. MAJOR RESEARCH PROJECT IN PROGRESS

Groepen in de brugklas volgens Dienes (Group theory with 12-year-olds according to Dienes's principles)

Responsible researchers: J. KONING, B. van der **KROGT**

Number of research workers engaged in project: 6

Starting date: May 1969

Probable completion date: August 1972

Purpose: To study the manageability of Dienes's principles in the "transitional" class; to investigate the manageability of the ideas developed by Professor Dr. Z.P. Dienes with regard to the learning of mathematical concepts in a normal classroom situation.

Special attention is paid to the principle of presentation of various graphically different models of the mathematical concept to be learned.

Procedure: Observations in classrooms, including observations made by video recording.

II. *Name of organisation:* PSYCHOLOGISCH LABORATORIUM VAN DE UNIVERSITEIT
VAN AMSTERDAM, AFDELING ONTWIKKELINGSPSYCHOLOGIE
(Department of Developmental Psychology,
University of Amsterdam)

Address: Vondelstraat 103, Amsterdam-W

Director: Professor Dr. Rita Vuyk

A. HISTORICAL

No data supplied.

B. STATUS AND PROGRAMME

1. The Department is part of the Psychological Laboratory of the Sub-Faculty of Psychology.

2. The Department has no board of its own.

3. There are no divisions, units, sections, etc.

4. There are 8 persons employed by the Department.

5. The Department has no budget of its own. Predominant source of finance: the university budget and grants for research projects from the Educational Research Foundation in the Netherlands (SVO).

6. Participation in the further training of teachers is by means of discussion groups concerning study lessons developed by the Department.

7. Participation in the training of educational research workers: organisation of study days during which researchers conduct discussions with teachers.

8. Objectives:

a) Educational innovation of the transitional year (ie the first year of secondary education training); design of study lessons; testing of their effectiveness; refresher courses for secondary education teachers.

b) Psychological research for the integration of general subjects into the vocational training programme, lower level (project started August 1970).

c) Behaviour modification in children; behavioural therapy.

C. MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

Ontwikkeling en begeleiding van studielessen in het brugjaar voor vwo, havo, mavo, lavo en lbo (Development and guidance of study lessons in the transitional year of schools for pre-university education /vwo/, secondary general education, higher level /havo/, secondary general education, intermediate level /mavo/, secondary general education, lower level /lavo/, and vocational training, lower level /lbo/).

Responsible researcher: R. VUYK

Number of research workers engaged in project: 6 researchers plus secondary school teachers and students of psychology

Total amount of time spent on project: January 1969 - December 1970

Purpose: To check whether psychological data concerning learning, thinking and development can be converted into practical and usable study lessons. - Revision of the first issue of study lessons on the bases of experience obtained with the application of these lessons and the issue of a second revised edition. - To make a parallel series of study lessons for vocational training, lower level, and secondary general education, lower level, in order to examine whether the achievement level of the pupils could be considerably improved by an increase in learning motivation and an improvement of the didactical approach. - To stimulate transfer of the principles used in the study lessons, to other lessons, by means of instructions and guidance given to groups of teachers.

Procedure: Evaluation forms for teachers; questionnaires for pupils.

Conclusions: The investigation was reduced to guidance of the teachers, working with the study lessons, by school psychologists. The set-up of the investigation was altered. Stress was now laid on the evaluation of the influence of the study lessons on the attitude and working habits of teachers instead of on their effect on pupils.

Bibliographical references:

Vuyk, R. *Werk- en denktraining in de studielessen.* J. Muusses NV, Purmerend, 1970.
(Vuyk, R. *Training of working and thinking in the study lessons.* J. Muusses NV, Purmerend, 1970.)

Vuyk, R. en medewerkers, *Studielessen.* Experimentele uitgave van de afdeling voor Ontwikkelingspsychologie. Universiteit van Amsterdam. Stadsdrukkerij Amsterdam, 1969.
(Vuyk, R. and co-workers, *Study lessons.* Experimental publication of the Department of Developmental Psychology of the University of Amsterdam. Stadsdrukkerij Amsterdam, 1969.)

D. MAJOR RESEARCH PROJECT IN PROGRESS

Evaluatie van een methode voor studielessen in het brugjaar vwo - havo - mavo (Evaluation of an instruction method for study lessons in the transitional year of schools for pre-university education /vwo/, secondary general education, higher level /havo/, secondary general education, intermediate level /mavo/)

Responsible researcher: R. VUYK

Number of research workers engaged in project:	4 researchers plus a working-party of students of psychology (graduate level)

Starting date: August 1968

Probable completion date: September 1971

Purpose: Evaluation of an instruction method for study lessons, designed by the Department of Developmental Psychology of the University of Amsterdam for the transitional year of schools for vwo, havo and mavo.

Procedure: Questionnaires, tests and study tests for pupils.

III. *Name of organisation:* PSYCHOLOGISCH LABORATORIUM DER UNIVERSITEIT VAN AMSTERDAM, AFDELING OPLEIDING ANDRAGOLOGEN (Psychological Laboratory, Department for the Training of Adult Educators, University of Amsterdam)

Address: Singel 445, Amsterdam

Director: Dr. P.B. Defares

C. MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

Het gedrag van de onderwijzer en de onderlinge verhoudingen van de leerlingen in een klas (Teacher behaviour and interrelationships of pupils in a class)

Responsible researcher: P.B. DEFARES

Number of research workers engaged in project: 2

Time spent on project: 1968-70

Purpose: To demonstrate the effect of the teacher's leadership behaviour on the degree of "isolation" of pupils.

Procedure: Sociometric methods leadership scale, factor analysis, statistical tests.

The socio-psychological theory that the interrelationships in a group of people depend to a high degree on the behaviour of the leader of the group is in this research project directed particularly towards the situation of teacher and pupils. The hypothesis to be tested reads as follows: In classes where the teacher's behaviour towards the class is conducive to the interrelation of the pupils, the interrelation is better than in classes where the teacher's behaviour towards the class in this respect is not conducive. Involved were 13 teachers of 13 sixth grades of elementary schools with their pupils, in total 414. The interrelationship of the pupils in each of the 13 classes is measured by means of the Syracuse scale of social relations; of each pupil the average received "succorance" score is calculated. At the beginning the behaviour of the teacher is sub-divided into nine styles: involvement, firmness, lecture, support, physical reward, punishment, threats, personal appeals, passivity. These nine styles of behaviour are then operationalised by adding to a number of situations which regularly occur in every classroom, nine approaches through which the teacher can handle the situation, each of the nine approaches being an operationalisation of one of the nine mentioned styles of behaviour or behavioural dimensions.

First it is checked whether the mentioned approaches or styles of behaviour of the teacher are found in school life. As a result of this examination a number of styles of behaviour are eliminated. Group experts give a criterion for the behaviour of the teacher which is conducive to the interrelation of the pupils. They are of the opinion that styles of behaviour which are operationalisations of the "involvement" behavioural style or dimension are the most conducive to the interrelation of the pupils.

After a check on the appearance in practice of the manners of behaviour and determination of the criterion for conducive manners of behaviour, the behaviour of the 13 teachers in this project is measured. They receive a list with the situations and a statement below each situation of the way of handling or manner of behaviour that could be employed in the relevant situation, in other words, the operationalisation of behavioural dimensions. The teachers are to indicate with each manner of behaviour how often they employ this in their class on a scale running from 1 (I neveremploy this manner of behaviour) up to and including 5 (I employ this manner of behaviour very often).

Conclusions: From the results it appears that in classes where teachers employ more "involvement" behaviour (ie a favourable behaviour for the interrelation of the pupils) the average received "succorance" score of the pupils on the Syracuse scale of social relations is significantly higher (ie the interrelation of the pupils is better) than in classes where teachers employ less "involvement" behaviour, which confirms our hypothesis.

IV.	*Name of organisation:*	SOCIOLOGISCH SEMINARIUM AAN DE FACULTEIT DER SOCIALE WETENSCHAPPEN DER UNIVERSITEIT AMSTERDAM (Sociological Seminary, Faculty of Social Sciences, University of Amsterdam)
	Address:	Oude Zijds Achterburgwal 185, Amsterdam
	Director:	Professor Dr. A.J.N. den Hollander

C. MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

Student radicalism in the context of a changing university

Responsible researcher: R. KROES

Number of research workers engaged in project: 2

Time spent on project: September 1969 - December 1970

Purpose: To get an insight into student radicalism.

Procedure: Survey technique applied to a representative sample and two focussed samples.

Conclusions: On the basis of a systematic model of conflict and radicalism an attempt is made to differentiate between so-called left-radical and right-radical students as well as the non-radical majority in terms of their perceptions of the structural context in which they find themselves. The main dimensions are thought to be power position, actual and future career opportunities, prestige. An attempt is made to trace negative and positive reference groups, possible allies within and without the student body, as well as the main components of the over all ideological position of the respective student interest groups. Identical questionnaires of semi-structured nature were submitted to: (a) a representative sample of the entire student population at the University of Amsterdam, (b) two small samples composed of leaders of right-wing and left-wing organisations that are in opposition to each other and can be taken as spearheading broader ideological groupings among the students. The organisations are respectively the OBAS and the ASVA.

V. *Name of organisation:* KOHNSTAMM-INSTITUUT VOOR ONDERWIJSRESEARCH AAN DE UNIVERSITEIT VAN AMSTERDAM
(Kohnstamm Institute for Educational Research, University of Amsterdam)

Address: Keizersgracht 73, Amsterdam

Directors: Professor Dr. Ph.J. Idenburg (General Manager)
Dr. N. Deen (Director)
Drs. R.Z. Swaab (Deputy Director)

A. HISTORICAL

1. Year of foundation: 1918. Year of coming into operation: c 1925.

2. The Institute was founded to meet the need for educational research.

3. The Institute was founded on the initiative of Professor Dr. Ph. Kohnstamm by the Society for Public Benefit (Maatschappij tot Nut van 't Algemeen) and named "Nutsseminarium voor Pedagogiek".

B. STATUS AND PROGRAMME

1. The Institute is affiliated to the University. There exists a link with the Pedagogical Institute of the University of Amsterdam in the person of Professor Dr. Ph.J. Idenburg. There is a financial link with the Ministry of Education and Sciences.

2. The Governing Board consists of 14 members representing the Faculty of Social Sciences of the University of Amsterdam, persons nominated by the Board of the University and persons nominated by the Board of Directors of the "Maatschappij tot Nut van 't Algemeen". This Board determines the policy of the Institute.

3. There are no subdivisions, sections or units.

4. There are 21 persons employed by the Institute. All are engaged full-time in research.

5. Budget

1968	DFls. 471,080
1969	DFls. 773,760
1970	DFls. 871,187

Predominant source of finance: the Educational Research Foundation.

6/7. The Institute does not participate in teacher or researcher training.

C. MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

Tweede algemeen leerjaar in een vierjarige technische school (Second general year of training in a 4-year technical training school, lower level)

Researchers: A. BOSSERS, N. DEEN, I.Ch. van DILLEN, D.H. QUIN

Time spent on project: 1964-70

Purpose: Development of a model for a 4-year technical school, lower level, with a second general year of training.
Educational objective: development of the flexibility of the students in order, amongst other things, to enlarge the possibilities for vocational mobility.

Procedure: Development of an instruction programme in co-operation with the teachers of the school; evaluation by the Institute. Attention is centred on the second year of training. However, the other years are also included. Particularly in the first and second years of training instruction was given greater polyvalence. Among other methods this was achieved by the introduction of a general technical laboratory, by giving giving attention to the language development of the students, and by a poly-technical approach to the practical subjects in the second and partially in the third year of training.

Conclusions: The investigation, as originally constructed, has been completed. However, recent developments in technical training, lower level, have made it necessary to continue the project in the form of an experimental investigation of a new polyvalent system in the third and fourth years of training.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Project lagere technische school met 4-jarige cursus; veralgemening 3e leerjaar* (Project technical school, lower level, with a four-grade course; generalisation instruction programme of the 3rd grade)

Researchers: P.W. KIMMEL, H.K.F. KALDENBACH, R. OUDERKERK POOL, R. SCHENK, J.Ch. van DILLEN, N. DEEN

Starting date: August 1970

Probable completion date: July 1973

Purpose: Organisational and contextual design of the 3rd and 4th grades of a 4-year polyvalent technical training, lower level.

a. Inquiry into a better adjustment of the 3rd grade to the subculture by development of a technical laboratory, longitudinal curriculum-planning, modernisation of didactics and subject matter in a technical school with 4 grades;
b. Development of a polyvalent technical training;
c. An attempt to integrate the P (practical) and T (theoretical) streams.

Procedure:

a. Organisational and contextual innovation;
b. Evaluation by means of a comparative attitude-investigation with the object of measuring the effect of innovation on teachers and pupils.

D.2 *Rekenproject basisonderwijs* (Arithmetic project primary education)

Researchers: G. BOOMSMA, L. de LEEUW, P. de JONG, K.P.A.M. van RAESFELD, F.J. v.d. BRINK

Starting date: January 1966

Probable completion date: September 1973

Purpose: To introduce changes in the didactics of arithmetic and measurement of the effect; to evaluate the arithmetic programme in the *Proeve van een leerplan voor het basisonderwijs tgv het 'moderne' wiskunde onderwijs* (Experimental plan for an instruction programme for new mathematics in primary education). The teaching aim is the development of a mathematical mode of thinking, viz critical, logical, creative thinking.

Procedure: Literature study, production of subject matter and teaching instructions, guidance, testing of subject matter.
One year preparation (literature study); six years explorative empirical research in four test schools; one year for reporting.
Empirical methods: explorative empirical guidance of teachers with the aid of teaching instructions and regular discussions; classroom observation; regular evaluation of pupils' behaviour and achievements.
Methods of teaching: from an intuitive approach to a cognitive approach; from concrete presentation to the abstract; from induction to deduction; strong accent on "guidance discovery"; class and learning discussions; group work (particularly in the higher grades); year classes.

VI. *Name of organisation:* PSYCHOLOGISCH RESEARCH LABORATORIUM AAN DE VRIJE UNIVERSITEIT
(Psychological Research Laboratory, Free University)

Address: De Boelelaan 1087 A, Amsterdam

Director: Professor Dr. S.D. Fokkema

A. HISTORICAL

1. Year of foundation: 1957.

2. Lack of opportunity for scientific research in the Sub-Faculty of Psychology led to the foundation of the Laboratory.

3. It was founded on the initiative of the joint Faculties of Literature, Philosophy and Medicine.

B. STATUS AND PROGRAMME

1. The Laboratory is a university institute.

2. It has no board of its own.

3. The Laboratory has the following divisions:

- Methodology
- Math. psychology and statistics
- School psychological research
- Ergonomics

4. There are 13 educational researchers working in the Laboratory of whom 2 are full-time.

5. Budget

1968	DFls.	69,100
1969	DFls.	110,000
1970	DFls.	140,000

Predominant source of finance: the university budget and grants from the Educational Research Foundation in the Netherlands (SVO) for research projects.

6. The Laboratory undertakes no teacher training.

7. The Laboratory does not participate in the training of educational researchers.

8. Fields of activities: Research into learning; psychological principles of education; various forms of programmed instruction and computer assisted instruction (CAI).

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Het leren hanteren van algoritmische en heuristische oplossingsmethoden* (Training in the handling of algorithmic and heuristic problem-solving methods)

Responsible researcher: L. de LEEUW

Number of research workers engaged in project: 3

Starting date: April 1970

Probable completion date: End of 1973

Purpose: To find an answer to the following questions:

a. Is it possible to teach students problem-solving methods for certain types of problems?

b. If so, what is the optimum degree of specificness of the solving methods to be learned (algorithmic vs heuristic)?

Procedure: The problems chosen are closely related to the regular school subject matter. Problem-solving is taught by application of solving methods. Problems in the area of inductive and deductive reasoning, respectively (a) extrapolation of number sequences, and (b) evaluation of logical conclusions in texts (critical reading). In both subjects the range of problem classifications is varied. Each problem type is taught by an algorithmic and a heuristic problem-solving method.
Dependent variables: post-test, transfer-test, retention-test
Subjects: 6th grade pupils, high school and university students
Method of presentation: branched programmed instruction and computer assisted instruction.

D.2 *Experimenteel onderzoek naar de invloed van niet-logische factoren in syllogismen redeneringen* (Experimental investigation of the influence of non-logical factors in syllogism reasoning)

Starting date: July 1970

Probable completion date: End of 1971

Purpose: The investigation is an experimental parallel of the project "Training in the handling of algorithmic and heuristic problem-solving methods".

Procedure: Syllogisms are presented on slides with a timer. Subjects are presented with the logical evaluation of syllogisms of five different moods, the conclusions of which are all valid. Influencing non-logical factors are: (a) the objective or subjective truth of the conclusions and (b) the disposition to react in a S-R response system. Within each mood-figure combination three different kinds of syllogisms are presented, the conclusions of which are respectively true, false or neither. Time is varied on three levels (a different group within each level). The proneness to react according to the two factors will be correlated to two cognitive style test-scores: (a) Stroop Word-Colour Test, and (b) Embedded-Figure Test (Witkin). In a second phase of the investigation the experiment will be replicated with visual prompts alongside the syllogisms. These will be formed by Venn-diagrams that visualise the syllogism. In this way can be determined whether the influence of the two factors can be reduced by stimulating cognitive activity.

D.3 *Programming of responsive environment to stimulate self-teaching*

Responsible researchers: A. DIRKZWAGER, G.C. v.d. VEER, L. de LEEUW, G.N. JAK, T. van LEEUWEN

Number of research workers engaged in project: 7

Starting date: June 1969

Probable completion date: 1971

Purpose: To examine to what extent computer controlled self-activity of the pupil stimulates the learning process.

Procedure: Computer assisted instruction. The machine used is a PDP-81. Soon the core memory will be extended to 8K. Interfacing with the random access image-projector (TM 1024) is well under way. The FORTRAN-compiler will be adapted to the programming of interactive programs. The teaching material will be sampled from different areas: teaching the concept of a function, paired associate learning with braille, syllogistic reasoning, discovering rules in number series, simple mechanical laws, the rounding of numbers. The machine is also being used to provide the experimenter on line with the necessary information on the optimum sequence of items in an experiment comparing different mathematical learning theories.

D.4 *Mathematical learning theories as tools for computer assisted instruction (CAI)*

Responsible researchers: G.C. v.d. VEER, G.N. JAK

Number of research workers engaged in project: 5

Starting date: Beginning of 1969

Probable completion date: Approximately 1973

Purpose: Development of rational decision procedures for CAI.

Procedure: CAI, computer simulation, programmed textbooks, learning experiments.

D.5 *Interne en externe factoren die van invloed zijn op het inductief oplossen van problemen* (Internal and external factors influencing inductive problem-solving)

Responsible researcher: S. DIJKSTRA

Number of research workers engaged in project: 2

Starting date: September 1968

Probable completion date: Unknown

Purpose: To get a better insight into the variables which are of importance in inductive reasoning.

Procedure: Experiments with school children and university students.

VII. *Name of organisation:* LABORATORIUM VOOR PSYCHODIAGNOSTISCHE EN BEDRIJFSPSYCHOLOGISCHE RESEARCH AAN DE VRIJE UNIVERSITEIT
(Laboratory for Psychodiagnostic and Industrial Psychological Research, Free University)

Address: De Boelelaan 1087A, Amsterdam

Director: Professor Dr. P.J.D. Drenth

A. HISTORICAL

1. Date of foundation: 1962.

2. Reason for foundation: the establishment of an independent tutorship for psychodiagnostics and industrial psychology.

3. The Laboratory was founded on the initiative of the Sub-Faculty of Psychology of the Free University.

B. STATUS AND PROGRAMME

1. The Laboratory is a university institute.

2. It has no board of its own.

3. There are sections for:
   - test development
   - industrial psychology.

4. There are 14 persons employed by the organisation of whom six are part-time researchers.

5. The Laboratory has no budget of its own.

6. No teacher training is undertaken.

7. The Laboratory trains students of psychology and pedagogy for further specialisation.

8. Fields and methods of activities:
a. Test development, personality research and evaluation, work-pscyhology, psychology of the organisation,
b. Empirical research (experimental and field research).

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1. *Ontwikkeling cultuurvisie testserie* (Development of a culture reduced test series)

Number of research workers engaged in project: 1

Starting date: September 1968

Probable completion date: Unknown

Purpose: The development of a test battery for Surinam. Apart from a theoretical section in which the requirements a culture reduced tests has to meet are clarified, a test battery is being developed which will function as a non-specific part of test programmes for education and industry in Surinam.

Procedure: Test takers of divergent groups.

D.3 *Ontwikkeling intelligentie testserie hoger niveau* (Development of a higher level intelligence test series)

Responsible researcher: P.J.D. DRENTH

Number of research workers engaged in project: 4

Starting date: 1965

Probable completion date: --

Purpose: Differentiation of intelligence structure and level in the highest form of havo/vwo (secondary general education, higher level) and the University and hbo (vocational training, higher level). The aim is to construct a test battery that is able to make differentiations between levels and types of intelligence within the higher levels of intelligence and education.

Procedure: Test development; factor analysis. Reliability and validity have been sufficiently established. Standards have been constructed for different school types and educational levels.

VIII. *Name of organisation:* VRIJE UNIVERSITEIT AFDELING CONFLICTUOLOGIE VAN DE SUBFACULTEIT DER PSYCHOLOGIE (Department of Conflict Studies, Sub-Faculty of Psychology, Free University)

Address: De Boelelaan 1087 A, Amsterdam

Director: Professor Dr. H.R. Wijngaarden

A. HISTORICAL

1. Year of foundation: 1957.

2. The Department of Conflict Studies is in the first place a training institute. In addition research is done in the field of education.

3. The Department was established by the Free University.

B. STATUS AND PROGRAMME

1. The Department is a university institute.

2. The Department has no board of its own.

3. There are no divisions, sections, etc.

4. There are 10 persons employed by the organisation of whom 2 are full-time researchers and 4 part-time.

5. Budget

1968	DFls. 16,164	Personnel cost not included
1969	DFls. 13,700	
1970	DFls. 14,850	

Predominant source of finance: the university budget.

6. The Department participates in the further training of teachers by post-graduate training in discussion techniques.

7. The Department does not participate in the training of educational research workers.

C. MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

Mechanisatie gespreksopleidingen in het WO (Mechanisation of discussion courses in university education)

Responsible researchers: A. VROLIJK, M.F. DIJKEMA

Number of research workers engaged in project: 3

Time spent on project: June 1969 - March 1970

Purpose: Mechanisation of discussion courses.

Procedure: Construction of programmed instructions (linear) and testing of a language laboratory for discussion courses. The theoretical part of the discussion course is mechanised through programmed instruction. This instruction is tested on psychology students and students of the social academy. Programmed instructions were constructed for (1) free attitude interview; (2) counselling; (3) bad news discussion; (4) appreciation discussion; (5) advisory discussion; (6) discipline discussion; (7) two-column discussion. All instructions mentioned are nearing completion.

The practical part of the discussion course is mechanised by means of a language laboratory. This allows for greater efficiency in the practical training with regard to time as well as the necessary number of students. The best way to use this language laboratory is being tested.

IX. *Name of organisation:* AFDELING ONDERWIJSRESEARCH VAN DE VRIJE UNIVERSITEIT
(Department of Research into Higher Education, Free University)

Address: De Boelelaan 1105, Amsterdam

Director: Drs. H.M. van Strien

A. HISTORICAL

1. Year of foundation: 1969.

2. Realisation of the need to establish within the universities educational research centres supported by the Academic Council, the national authorities and the universities themselves, led to the foundation of the Department.

3. The Department was established by the board of the University.

B. STATUS AND PROGRAMME

1. The Department forms part of the University.

2. The Board consists of about 15 members. Functions:

- scientific guidance
- acknowledgment of guidance projects
- liaison between faculties.

3. There are no divisions, sections, etc.

4. There are three persons working with the organisation of whom two are part-time researchers and one full-time.

5. Budget

1969	DFls. 8,000	) exclusive of
1970	DFls. 23,000	) salaries

Predominant source of finance: the university budget.

6/7/8. There are no training programmes for teachers, educational researchers. There is no systematic research programme. Research is done at the request of the faculties.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Vergelijking meerkeuzevragen - waar/onwaar vragen* (Comparison of multiple-choice questions with true/false questions)

Researcher: H. SMITSKAMP

Starting date: May 1970

Probable completion date: June 1971

Purpose: Comparison of multiple-choice questions with true/false questions.

Procedure: Comparison of responses to different types of questions with the same content within one group and between two groups of students.

D.2 *Instructiemethoden bij het Anatomie onderwijs* (Instruction methods in the teaching of anatomy)

Researcher: H.M. van STRIEN

Starting date: September 1970

Probable completion date: May 1972

Purpose: Evaluation and development of instruction methods.

Procedure: Tests, examination data, inquiries, data on participation in teaching and study methods.

D.3 *Motivatie en studiegedrag* (Student motivation and study behaviour)

Researchers: M.M. GODDIJN, H. SMITSKAMP, H.M. van STRIEN

Starting date: November 1969

Probable completion date: November 1971

Purpose: Student motivation and study behaviour.

Procedure: Interviews; questionnaires.

X. *Name of organisation:* INSTITUUT VOOR ONDERWIJSKUNDE VAN DE RIJKSUNIVERSITEIT VAN GRONINGEN (Institute of Education, State University of Groningen)

Address: Westerhaven 16, Groningen

Director: Professor Dr. L. van Gelder

A. HISTORICAL

1. Year of foundation: 1965.

2. The Institute was founded on account of the need for the training of educationalists, the need for research in the field of education and the need for educational research in general.

3. It was founded on the initiative of Professor Dr. L. van Gelder.

B. STATUS AND PROGRAMME

1. The Institute is part of the University of Groningen.

2. The Board of the Institute is responsible to that of the State University. It consists of 13 persons representing the academic and non-academic staff plus students. They discuss the daily course of affairs, the training programme and the research programme. The Institute has a council, consisting of representatives of the academic and non-academic staff plus students, which is entrusted with certain management duties.

3. The Institute has various training programmes:

- General and comparative education
- Didactics
- Methodology
- Pedology.

4. Size of staff: no information available.

5. Budget

1968	DFls. 75,000	cost of housing not included
1969	DFls. 170,000	
1970	DFls. 363,800	

Source of finance: University budget and, for the execution of research projects, grants from the Educational Research Foundation in the Netherlands (SVO) and other organisations.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Kleuter- en basisonderwijs ten plattelande* (Pre-primary and primary education in rural areas)

Responsible researcher: M. SANTEMA

Number of research workers engaged in project: 17

Starting date: September 1969

Probable completion date: September 1974

Purpose: Design of an organisation model with variants for pre-primary and primary schools and the testing of it in some rural areas.

Procedure: Inquiries, interviews, observations, group discussions, tests, literature study.

D.2 *Rekenproject* (Arithmetic project)

Development of a teaching-learning package for the first graders of domestic science education for girls

Responsible researchers: W.J. BRANDENBURG, N.A.J. LAGERWEG, H. BEKS, A. BOERSMA, L. DORTMA, M. KLUGKIST-ROMA

Number of research workers engaged in project: 7

Starting date: August 1967

Probable completion date: December 1971

Purpose: Development of a teaching-learning package in order to introduce innovations into this section of education.

Procedure: Interview inquiry; instruction reports; informative meetings; statistical methods.

D.3 *Ontwikkeling van een model voor curriculum onderzoek en ontwikkeling* (Development of a model for curriculum research and development)

Responsible researchers: A.H. van den BERG, L. POSTMA, J. SNOEP

Number of research workers engaged in project:	2 full-time researchers, 2 full-time administrative clerks, 16 part-time co-workers

Starting date: August 1968

Probable completion date: January 1973

Purpose: Development of a model for curriculum research and development; development of a curriculum for history for elementary and subsequent secondary education.

Procedure: A new model for curriculum research and development, in which the co-operation between 50 schools and the Institute played a central role, has been developed. This model makes it possible to link product-development (the curriculum) and process-development (attitude-change or "innovation" in groups of individuals).

What is aimed at is the realisation of conditions which will allow the implementation of the planned curriculum. The design of all plans requires research into the existing situation of institutions and staff in order to define initial conditions to be changed. Only with the aid of the results of such research and the development of these plans can progress be made towards the construction of the new curriculum and its experimentation. It is assumed that the entire process of planning, orientation, construction and experimentation should be accompanied by evaluation. During the entire research and development process evaluation will aid decision-making by bringing under discussion such information as appears to be of interest in order to take the following step.

XI. *Name of organisation:* INSTITUUT VOOR ORTHOPEDAGOGIEK VAN DE RIJKSUNIVERSITEIT GRONINGEN (Institute of Special Education, State University of Groningen)

Address: Grote Rozenstraat 15, Groningen

Director: Professor Wilhelmina J. Bladergroen

A. HISTORICAL

1. Year of foundation: 1968.

2. Reason for the foundation: Development of a department of special education.

3. The Institute was founded on the initiative of the Governing Board of the Social Faculty of the State University of Groningen.

B. STATUS AND PROGRAMME

1. The Institute is part of the State University.

2. It has no board of its own.

3. The Institute has no separate departments.

4. There are nine persons employed by the Institute of whom six are part-time researchers.

5. Budget

1968	DFls. 20,000

The Institute receives funds from the university budget for training purposes only, not for research.

6. The Institute participates in the further training of teachers at the post-graduate level.

7. The Institute participates in the training of educational research workers by providing special courses for teachers.

8. Aims and methods of research activities:
a. Detection and diagnosis of developmental disorders inhibiting normal school training;
b. Development and evaluation of remedial training programmes in primary school subjects;
c. Development and evaluation of remedial techniques and educational toys.

C. MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

De invloed van sociale en psychologische factoren op het rendement van het onderwijs (The influence of social and psychological factors on the output of education)

Researcher: G. van KEMA

Time spent on project: 1958-70

Purpose: To increase educational output.

Procedure: Follow-up examination of two samples in a population of pre-university students; validation.

Conclusions: In the period from 1957-65 a follow-up examination was carried out on pre-university students in the province of Drente with regard to the predictive value of a group intelligence test taken in the sixth grade of elementary school. These students (300) were observed until and including their final examinations.

It was found that as the students proceed to the higher grades of pre-university training the predictive value of the above mentioned test increases and the value of the elementary school headmasters' judgment decreases significantly. The latter no longer has any value with regard to long-term prediction.

To check the results obtained a new follow-up examination was carried out with another sample (350 students) in the town of Groningen. These pupils were tested in 1961 when in elementary school. Observation was continued up to and including 1969. The results confirm to a large extent the findings of the first project.

Bibliographical references:

Results of specific research in *Pedagogical Studies* 1962-64.

XII. *Name of organisation:* PAEDAGOGISCH INSTITUUT RIJKSUNIVERSITEIT LEIDEN (Pedagogical Institute, State University of Leyden)

Address: Stationsplein 10, Leiden

Director: Professor Dr. L. de Klerk

A. HISTORICAL

1. Year of foundation: 1961

2. Reason for foundation: Teaching and educational research.

3. The Institute was founded on the initiative of the Board of the University.

B. STATUS AND PROGRAMME

1. The Institute is part of the Faculty of Social Sciences of the State University of Leyden.

2. It has no board of its own.

3. The following divisions exist in the Institute:

- Educational science
- Socio-pedagogics
- Orthopedagogics

4. 15 persons are employed by the Institute.

5. Budget

1968	DFls. 350,000	cost of housing not included
1969	DFls. 420,000	
1970	DFls. 820,000	

Predominant source of finance: the university budget.

6. The Institute participates in the training of teachers by providing courses for instruction, didactics and psychology of adolescents.

7. Participation in the training of educational research workers:

- Specialisation
- Graduate examinations.

C. MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

C.1 *Feed-back classroom*

Responsible researcher: D. de JONG

Number of research workers engaged in project: 3

Time spent on project: January - December 1969

Purpose: To examine, with the assistance of electronic processing of data on the teaching-learning process, group instruction through which a high degree of adaptability is obtained.

Procedure: Direct processing by computer of responses and feed-back of data processed.

Conclusions: For research into feed-back mechanisms in education and for research into the relation of variables in pupil behaviour in general, an apparatus was developed that enables the teacher (researcher) to have immediate feed-back on a television screen of: (1) responses to multiple-choice questions (8 positions per pupil) of all (max. 20) pupils, plus his own response (item number and the right answer), (2) a frequency distribution of the responses, (3) the number of items left.

All responses are registered by computer, on-line (IBM-1800; distance from classroom 900m): address, which response(s), time of "start" and "stop" signal of the teacher, response time (time from signal "start" to last answer of each pupil; 3 corrections are registered). All data are stored on discs. All usual kinds of computer processing are possible.

Before starting research into the relevance of pupil variables for feed-back in group education, we made a comparison of a paper-and-pencil test and the same test in which the apparatus was used, to find out if, and to what extent, a strict sequence of items and an arbitrarily chosen, fixed time per item (which is a consequence of the use of the apparatus in groups) determined the answering behaviour of pupils. We found no significant difference with three groups of students (23 items) in scores.

Multiple choice questions inserted in lessons for students (three groups) and pupils (two classes, one teacher) of the secondary level with the intention to use the feed-back for immediate discussion and - if necessary - correction by the teacher, gave rise to intensive, almost aggressive, discussions about the formulation of the alternatives of the participation questions in particular.

Justification of a wrong answer seemed to be a strong motive. Teacher and pupils had a mildly positive attitude to working in the feed-back classroom.

C.2 *Onderzoek naar de mogelijkheden en effecten van het gebruik van tv gedragstraining van as onderwijzers* (Investigation of the possibilities and effects of the use of television on behavioural training of future teachers - micro-teaching)

Responsible researcher: F.K. KIEVIET

Number of research workers engaged in project: 4

Time spent on project: September 1968 - December 1970

Purpose: Investigation of the possibilities of the use of television in the classroom training of future teachers.

Procedure: Video recording, repetitions, personal assessments.

Conclusions: The current research is executed with students of institutes that train elementary schoolteachers. Apart from the theory, the classroom training of these future teachers consists of attending lessons and of giving trial-lessons in elementary schools. One may say that principally two methods are used in this practical training: (a) The method of the verbal transfer: explanations of how to act are given to the future teachers; (b) The imitative method: the future teachers are invited to imitate the teacher with whom they happen to attend lessons. Several disadvantages are inherent to these two methods. The intention is to explore methods which promise to be more efficient.

Bibliographical reference:

Micro-teaching in teacher training, *Pedagogisch Forum*, 1970, nr 1.

D. MAJOR RESEARCH PROJECT IN PROGRESS

Ontwikkeling computer gestuurd onderwijs (Computer assisted instruction)

Responsible researchers: L. de KLERK, F.J. SLOBBE

Number of research workers engaged in project: 5

Starting date: January 1969

Probable completion date: Unknown

Purpose: Development of computer assisted training as a preparation for its use in school and in educational research.

Procedure: Programmed learning; development of learning and branching strategies; usual methods of controlled empirical investigation. The research in this project is in the tradition of branched programmed learning. A sequence of frames is typed out for the student or shown by visual aids. Statistics on the student responses are kept. They serve as a base for automated decisions on the sequencing of frames and on the branching of students. The tactics and strategies that can be used for branching will be one of the possibilities and limitations of the CW III or another system as an instructional technique in universities and secondary schools.

XIII. *Name of organisation:* PSYCHOLOGISCH INSTITUUT DER RIJKSUNIVERSITEIT LEIDEN
(Institute of Psychology, the State University of Leyden)

Address: Rijnsburgerweg 169, Leiden

Director: Professor Dr. A.M.J. Chorus

D. MAJOR RESEARCH PROJECT IN PROGRESS

Testreeks selectie leerlingen voor ihno, ito en vbo (Test series for the selection of pupils for individual domestic science training *(ihno)*, individual technical training lower level *(ito)* and preparatory vocational training *(vbo)*

Researchers: W. van HOORN, M.J. KOORNSTRA, H. NEUWAHL

Starting date: 1968

Probable completion date: 1974

Purpose: Definitive selection procedure for *ihno*, *ito* and *vbo*.

Procedure: Test, inquiries, follow-up data, quantitative methods.

XIV. *Name of organisation:* AFDELING SCHOOLPSYCHOLOGIE VAN DE RIJKSUNIVERSITEIT LEIDEN
(Department of School Psychology, State University of Leyden)

Address: Rijnsburgerweg 146, Leiden

Director: Dr. P. van den Broek

A. HISTORICAL

1. Year of foundation: 1953.

2. A differentiation of subject areas and tasks within the Psychological Institute of the University led to the foundation of the Department.

3. The Department was founded on the initiative of Professor Dr. A. Chorus.

B. STATUS AND PROGRAMME

1. The Department is a university institute.

2. It has no board of its own.

3. There are no divisions, sections, etc.

4. Three part-time researchers are attached to the Department.

5. Budget

1968	DFls. 4,000	) Personnel cost, about
1969	DFls. 4,500	) DFls. 200,000, is
1970	DFls. 5,000	) not included

Predominant source of finance: the university budget.

6. The Department does not participate in teacher training.

7. The Department does not participate in the training of educational researchers.

8. Aims: Guidance programme for elementary and secondary education. Fields: Transition from elementary to secondary education, guidance during the transitional year, streaming in vocational education, lower level. Methods: Diagnostic testing, guidance of teachers and pupils.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Determinatie + doorstroming lager beroepsonderwijs* (Assessment and streaming in vocational training, lower level)

Responsible researcher: P. van den BROEK

Number of research workers engaged in project: 3

Starting date: 1968 (preliminary investigations 1958)

Probable completion date: Unknown

Purpose: Guidance of pupils in LBO (vocational training at lower level), forms of integration in LBO, co-ordination between LBO and MBO (vocational training, advanced level).

Procedure: Test examination in groups, systematic refresher courses for teachers, guidance of pupils.
Inventory of pupil representation at the beginning and the end of vocational training lower level, differentiation according to the type of LBO, differentiation according to preparatory training.
Comparison and harmonisation of curricula in various types of LBO, investigation of LBO-MBO co-ordination problems.

D.2 *Overgang LO - VO* (Transfer from primary education to secondary education)

Responsible researchers: P. van den BROEK, W.L.L. HULSMAN

Number of research workers engaged in project: 3

Starting date: 1968

Probable completion date: 1975

Purpose: Pupil counselling from the fifth form of primary school to the first form of secondary education. The project aims to improve education by means of a periodic screening of classes in order to locate underachievers; to inform teachers of the pupils' abilities; to trace hidden reading and behavioural deficiencies in the school.

Procedure: School achievement tests, intelligence tests, motivation - interest tests, talent tests.
1. Combined research with school achievement and intelligence tests;
2. Research into specific talents;
3. Research into interest and motivation.
Execution: (a) Working groups consisting of teachers and psychologists construct tests; (b) Tests taken once a year; (c) Statistics processed by psychologists; (d) Discussion of results by psychologists and teachers.

D.3 *Begeleiding leerlingen AVO* (Guidance in secondary general education)

Responsible researchers: Y.B. van den SLUIS, P. van den BROEK

Number of research workers engaged in project: 4

Starting date: 1966-68

Probable completion date: Unknown

Purpose: Analysis of the causes of failure in secondary general education; development of methods for guidance.

Procedure: Group and individual research, discussion guidance of students, teacher guidance.
Hypotheses: (1) Students do not fail because of intelligence deficiencies; (2) Teachers and prospective students speak different languages; (3) In many cases, discussion guidance bridges the teacher-student gap.

XV. *Name of organisation:* BUREAU ONDERZOEK VAN ONDERWIJS DER RIJKSUNIVERSITEIT LEIDEN (Educational Research Centre, State University of Leyden)

Address: Boerhaavelaan 43, Leiden

Director: Dr. H.F.M. Crombag

A. HISTORICAL

1. Year of foundation: 1968.

2. The need for educational research within the University of Leyden led to the foundation of the Centre.

3. It was founded on the initiative of the Governing Board of the senate of the University.

B. STATUS AND PROGRAMME

1. The Centre is a university institute.

2. The Governing Board consists of ten persons representing the various faculties, the central bureau of the University and the student body.

3. There are no divisions, sections, units, etc.

4. The staff consists of eight full-time researchers.

5. Budget

1968	DFls. 3,000	excluding cost of housing and salaries
1969	DFls. 9,100	
1970	DFls. 9,100	

Predominant source of finance: the university budget.

6. Teacher training is undertaken with regard to the use of multiple choice study sests.

7. Training of educational research workers: Students are given the opportunity to assist in ad hoc projects.

8. Aims: Development of a method for curriculum structuring; Research into behaviour variables of students in the study situation; Investigation and evaluation of traditional assessment methods.
Methods: Questionnaires, interviews and statistical techniques of analysis.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Curriculum development in the Law Faculty - first and second years*

Responsible researcher: H.F.M. CROMBAG

Number of research workers engaged in project: 3

	1st year	2nd year
Starting date:	September 1968	February 1970
Probable completion date:	September 1972	September 1973

Purpose: To find a curriculum development method. To introduce a curriculum in the first year of law training.

Procedure: Monthly discussions principally with teachers of the discipline; progress recorded in written memoranda.

A report was produced when the first phase of this sub-project ended in January 1970. The report gives a description and an analysis of educational goals that are pursued in the first-year course. Special attention is given to the analysis of complex educational goals, such as "analysis of juridical texts" and "the solving of case positions". The report also includes a discussion of proposals made by the Academical Statute Committee of the Law Faculty (Commissie Academisch Statuut van de Faculteit der Rechtsgeleerdheid), regarding the reform of the "BA" curriculum. An important element in the proposals made by the Committee is the introduction of a "training in methods and techniques" in the first-year course. The Centre was requested to co-operate in the realisation of this training. Apart from this, the project was continued through separate consultations with the staff from both Roman Law and Social Law.

This sub-project is limited to two courses in the CII examination programme. Co-operation with the Economics Section dates from January 1970, and with the Constitutional Law Section from May 1970.

The Economics Section asked the Centre for advice with regard to the organisation of instruction in working groups within the CII course, and for assistance in changing over from the traditional written examination to an objective testing system. A discussion concerning the first request was soon concentrated on the objective of the course and ended in deadlock. It was decided to concentrate attention in the first phase on the second question: the writing of multiple-choice questions based on the subject matter of the course. This compilation of questions could then be used in the second phase as a starting point for further discussion on the objectives.

In the period reported, work was limited to the writing of multiple-choice questions. Comments by the Centre on these questions were recorded in a series of memoranda. This first phase will be terminated in the middle of 1971. The Constitutional Law Section also approached the Centre with a request for advice regarding the formulation of educational objectives for the CII course. Following several preliminary discussions, the Centre carried out a critical investigation, based on the examination questions of the past two years, on the objectives that the staff appears to pursue according to the examination questions posed. Tentative proposals with respect to further specification of the description of objectives and a translation into educational procedures were formulated.

D.2 *Beoordelingsmethoden* (Methods of assessment)

Responsible researcher: H.F.M. CROMBAG

Number of research workers engaged in project: 3

Starting date: January 1969

Probable completion date: Unknown

Purpose: (a) Investigation of the usual methods of investigation in education; (b) Development of new methods of assessment; (c) Development of measuring tools to be used for purposes other than assessment.

Procedure: Statistical techniques of analysis. This project is divided into two sub-areas: "assigned research" and "independent research". The first concerns two comparisons between various forms of examinations. The second includes topics such as equating, test models and a number of smaller topics.

D.3 *Curriculum ontwikkeling sectie Geschiedenis* (Curriculum development in the History Section)

Researcher: H.F.M. CROMBAG

Starting date: January 1970

Probable completion date: Mid 1972

Purpose: (a) To find a method of curriculum development; (b) The creation of a curriculum for the first-year university history course.

Procedure: Monthly discussions with teachers of the section. In January 1970 the investigation started in the History Section of the Literature Department. On the one hand this investigation is making an inventory of educational objectives (first phase) with the object of giving advice on the educational procedures to be followed; on the other it is examining to what extent there is conformity with similar research in the CI-phase of the law studies.

D.4 *Studeergedrag* (Study behaviour)

Researchers: M. GEENSEN, afterwards T.M. CHANG

Starting date: October 1968

Probable completion date: July 1972

Purpose: Determination of the relation between study behaviour, study environment and study results.

Procedure: Questionnaires and statistical techniques of analysis.

All data for this project that started in 1968 were gathered in the past year. During the autumn of 1969 data on intelligence and other personality traits of prospective students were collected. The test group, in total approximately 900 students, consisted of chemistry, medicine, psychology and law students. Originally, prospective Dutch literature students were also included in the investigation in order to attain a good spread over the different faculties; however, in view of the small number it was decided not to take this group into consideration.

In February 1970 data were collected on motivation and study environment. Questionnaires on study behaviour were mailed in the course of the year. In September 1970 data collection on study results started. Statistical analyses were conducted on the questionnaires on study environment and study behaviour. The first report on the results of the questionnaire of study environment is to be expected in the autumn of 1970.

XVI. *Name of organisation:* INSTITUUT VOOR ONDERWIJSKUNDE, SUBFACULTEIT DER PEDAGOGIEK VAN DE KATHOLIEKE UNIVERSITEIT NIJMEGEN
(Institute of Education of the Sub-Faculty of Pedagogy, Catholic University of Nijmegen)

Address: Berg en Dalseweg 105, Nijmegen

Director: Professor Dr. E. Velema

A. HISTORICAL

1. Year of foundation: January 1971.

2. Social developments led to the foundation of this Institute.

B. STATUS AND PROGRAMME

1. The Institute is part of the Department of Pedagogy of the Social Science Faculty of the Catholic University.

2. The Board of the Institute consists of five members. Its function is to prepare the educational curriculum (graduate level).

3. There are no divisions, sections, etc, within the Institute.

4. 13 persons are employed by the Institute of whom four are full-time researchers.

5. The Institute did not have a budget of its own before 1971. Research projects carried out by the Department of Pedagogy were financed by the *Nederlandse Organisatie voor Zuiver-Wetenschappelijk Onderzoek (ZWO)* (Netherlands Organisation for Purely Scientific Research) and the *Stichting voor Onderzoek van het Onderwijs (SVO)* (Educational Research Foundation).

Predominant source of finance: the university budget.

6. The Institute conducts teacher training courses.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Constructie van een aantal schoolvorderingentests voor het basisonderwijs* (Construction of a number of school achievement tests for primary education)

Responsible researchers: B.Th. BRUS, M.J.C. MOMMERS, B.W.G.M. SMITS

Number of research workers engaged in project: 4

Starting date: 1968

Probable completion date: 1972

Purpose: Standardisation of three reading and two arithmetic tests.

Procedure: Normal procedure for test standardisation.
The following tests will be constructed:
Eén-Minuut-Test (One Minute Test): A speed test for word recognition; two equivalent forms intended for the 2nd, 3rd, 4th and 5th grades of primary school.
Schriftelijke Opdrachten (Written Assignments): A direction test for reading comprehension; three forms, intended respectively for the 2nd, the 2nd and 3rd, and the 3rd and 4th grades of the primary school.
Stilleestest (Silent Reading Test): Three forms, intended for the 3rd, 4th, and the 5th and 6th grades respectively of the primary school.
Woordenschattest (Vocabulary Test): For the 10-12 age group.

The standardisation will be carried out on samples formed by the pupils of 25 schools. These schools are a random sample out of the primary schools in the Netherlands.

D.2 *Onderzoek naar het effect van een training betreffende de interactie leraar/leerling op de aanpassing van het onderwijsgedrag aan de situatie van de klas als leergroep* (Investigation of the effect of an interaction training programme on the adjustment of the teaching behaviour to the situation of the class as a learning-group)

Responsible researchers: B.Th. BRUS, A.A. JASPERS, B.J. WOLTERS

Number of research workers engaged in project: 7

Starting date: 1970

Probable completion date: 1972

Purpose: To examine whether training on the basis of interaction analysis will have such an effect on teaching behaviour that this behaviour will be better adjusted to the situation of the class as a learning group. Secondary objects: development or revision of a training programme and of two measuring tools.

Procedure: Experiment with control group; systematic observation; attitude inventory; item analysis.
Problem: Will teaching behaviour change by means of a training programme on the basis of interaction analysis (Flanders) towards greater adjustment to the learning situation of the group?
Design: Experiment with control group.
Independent variable: An interaction analysis training course developed on the basis of similar courses in the USA. Class situations will be varied through specific directions to the teacher.

Dependent variable: Differences between indices obtained by the CICS (Amidon-Hunter); class climate measured with a "Dutch version of the MPAI (Flanders)".
Sample: Elementary school teacher, fifth grade, in-service, volunteers.

D.3 *Inventarisatie van gebruik van en ervaringen met geprogrammeerde instructie in het basisonderwijs* (Inventory of the use of and experience with programmed instruction in primary education)

Responsible researcher: A. JASPERS

Number of research workers engaged in project: 2

Starting date: October 1968

Purpose: Inventory of the use of and experience with programmed instruction in primary education.

Procedure: Inquiry by means of questionnaires.
Background: (a) What is the contribution of teaching practice to instruction theory in general and to programmed instruction in particular? (b) To what extent have investments (time and energy) in programmed instruction spread into the field of teaching?
Question: To what extent has programmed instruction pervaded teaching practice?
Data collection: (a) Inquiries in elementary schools to find out which and how many schools employ programmed instruction and to collect quantitative and school data; (b) Inquiries among the teachers in schools which do and do not make use of programmed instruction. The collection of data on the personality of the teacher and on his attitudes towards and his future plans for the use of programmed instruction.
Sampling: (a) A systematic sample at random from a mailing list of all elementary schools (1575) from about 8500 schools; (b) A sample at random from the teachers: 169 teachers from schools not using programmed instruction and 212 teachers from schools using programmed instruction.
Data processing: Punch cards; computer processed.
Analysis: straight runs and determination of correlation between programmed instruction data on the one hand and school and personnel data on the other hand.

D.4 *Ijking van studietoetsen met betrekking tot de leesvaardigheid van blinde kinderen in het basisonderwijs en een exploratief onderzoek naar de factoren, die de leesvaardigheid van blinde kinderen beinvloeden* (Standardisation of study tests with regard to the reading skill of blind children in elementary education and an explorative investigation of the factors that influence the reading skill of blind children)

Responsible researcher: M.J.C. MOMMERS

Number of research workers engaged in project: 4

Starting date: January 1970

Probable completion date: December 1972 or 1973

Purpose: Standardisation of achievement tests and an initial approach to factors affecting braille reading.

Procedure: Tests, observations, questionnaires.
This research project has a twofold purpose: (1) The standardisation of achievement tests for braille reading in the elementary grades; (2) A survey of the factors which affect the reading ability of blind pupils in the elementary grades.
The number of pupils involved in this investigation amounts to about 120. All of them are pupils of the Dutch institutes for the blind, with the exception of the doubly handicapped. This project will extend over three or four years. In addition, data are being gathered about the manner in which instruction in braille reading is given in the Dutch institutes involved.

XVII. *Name of organisation:* INSTITUUT VOOR ORTHOPEDAGOGIEK KATHOLIEKE UNIVERSITEIT NIJMEGEN
(Institute of Special Education, Catholic University of Nijmegen)

Address: Berg en Dalseweg 101, Nijmegen

Director: Dr. J.J. Dumont

A. HISTORICAL

1. Year of foundation: 1961. Year of coming into operation: 1964.

2. The need for training and research in the field of special education led to the foundation of this Institute.

3. It was founded on the initiative of the Governing Board of the Catholic University.

B. STATUS AND PROGRAMME

1. The Institute is part of the Faculty of Social Science.

2. It has no board of its own.

3. The following sections exist:

- Ortho-didactics
- Residential treatment and therapy
- Care for mentally defective children
- Research

4. Two part-time researchers are attached to the Institute.

5. The Institute is financed by the University.

6. There are refresher courses for primary school teachers and courses for special primary education.

7. Students are given the opportunity of working in the Institute as assistants.

8. Aims of the Institute are the development and realisation of selection and evaluation criteria in relation to (ortho)pedagogic programming.

D. MAJOR RESEARCH PROJECT IN PROGRESS

Follow-up "Curriculum School-readiness"

Responsible researchers: L. STEVENS, U. OUD, M. BOLHAAR

Number of research workers engaged in project: 10

Starting date: December 1969

Probable completion date: June 1971

Purpose: Curriculum evaluation.

Procedure: Intelligence research, school performance tests, questionnaires for parents and (female) teachers, language and function development tests.
Project evaluation Curriculum School-readiness: The investigation deals with groups of 6-year-old children to whom, on account of early diagnosed learning difficulties, in the scholastic years 1968-69 (n=22), 1969-70 (n=20) and 1970-71 (n=65) a specially designed curriculum (so-called Curriculum School-readiness, Malmberg, Den Bosch, 1970) has been or is being offered in transition classes specially formed for this purpose. During the execution of the Curriculum are determined the degree of immediate effect on the learning behaviour of the child, and in those transferred to the normal elementary school, the extent of permanent effectiveness.
For each of the three groups there is a comparable group of children who

were considered for the above mentioned transition class but who were not placed in it for several reasons and who simply went to the normal primary school following kindergarten.
The evaluation project is of a quasi-experimental nature.

XVIII. *Name of organisation:* INSTITUUT VOOR ONDERWIJSKUNDE AFDELING LERARENOPLEIDING, KATHOLIEKE UNIVERSITIET NIJMEGEN
(Teacher Training Department of the Educational Institute, Catholic University of Nijmegen)

Address: St. Annastraar 174, Nijmegen

Director: Professor Dr. E. Velema

A. HISTORICAL

1. Year of foundation: 1970.

B. STATUS AND PROGRAMME

1. The Department is a division of the Educational Institute of the Sub-Faculty of Pedagogy.

2. It has no board of its own.

3. The Department is not divided into sections.

4. Three persons are employed by the Department of whom one is engaged in research activity for 90% of his time.

5. The Department is financed by the University.

6. Training of teachers)
) No details supplied.
7. Training of educational researchers)

8. Aims and methods:

- Administrative procedures (profession-motivation and satisfaction, preparation for a profession)
  Field: teachers in secondary education
- Less practically directed scientific research (personality of the teacher; construction of attitude scales).

Methods: questionnaires, tests, attitude scales.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *De opvattingen van leraren bij het vwo en havo* (Opinions of secondary school teachers on the training of teachers)

Responsible researcher: B. WOLTERS

Number of research workers engaged in project: 3

Starting date: April 1969

Probable completion date: June 1971

Purpose: To support policy in favour of teacher training. What do the teachers think of professional preparation? What content should it be given? The report consists of two parts: a survey of the opinions of teachers on teacher training; a survey of the influence of some variables (subject, sex, whether the teachers have received training or not, etc) upon these opinions.

Procedure: Attitude scale, questionnaire method, pre-coded, open. From the results of the first part it appeared that about 80 per cent of the respondents (only 55 per cent answered) were of the opinion that subject training alone is insufficient to guarantee correct practice of one's profession. About half of the respondents would prefer to split a six-year study into five years of subject training and one year of professional training. The respondents greatly valued experiences with the teaching-learning process and with practical teaching as a preparation for their future profession. There are indications which give the impression that the respondents considered their professional training to have been divorced from reality, but that they have no specific ideas to offer on the matter. The results of the second part are still in preparation.

D.2 *De persoonlijkheid van de leraar, in het bijzonder bij het vwo en havo* (The personality of the teacher, particularly the secondary school teacher)

Responsible researchers: B. WOLTERS, A.M.P. KNOERS

Number of research workers engaged in project: 4

Starting date: January 1970

Probable completion date: June 1972

Purpose: To what extent does a teacher's personality enable him to allow other persons to develop freely?
Thesis.
The research hypothesis is: there is a difference in ability to allow another person freedom of development (in the sense of being less

authoritarian, complex, independent and flexible) between the teacher, particularly the secondary school teacher, and representatives of other non-social professional categories.

Procedure: Attitude scales; tests, verbal and non-verbal.
The measuring instruments are:
- a Dutch version of the F-scale (1)
- an (American) revision of the Barron-Welsh Art scale
- a Likert scale "Independence of judgment" (2)
- adjectives "Independence of judgment" (2)
- The Wesley questionnaire about rigidity (Wesley Rigidity Inventory)(3)

The subjects in the experiment are: 100 urban teachers, 50 rural teachers (mixed religion), 50 rural teachers (predominantly Roman Catholic), and 200 urban representatives of non-social professions.

In a preliminary investigation the four verbal instruments will be subjected to an item-analysis.

---

(1) Weima, J. *Psychologie van het antipapisme* (Psychology of anti-papism) Hilversum/Antwerpen, 1963.

(2) Barron, F. Some personality correlates of independence of judgment, *Journal of Personality,* 1953, 21, 287-297.

(3) Chown, S.M. A factor analysis of the Wesley Rigidity Inventory, its relationship to age and non-verbal intelligence. *Journal of Abnormal and social psychology,* 1960, 61, 491-494.

XIX. *Name of organisation:* PSYCHOLOGISCH LABORATORIUM DER KATHOLIEKE UNIVERSITEIT NIJMEGEN
(Psychological Laboratory, Catholic University of Nijmegen)

Address: Erasmuslaan 16, Nijmegen

Director: Professor Dr. G. Brenninkmeyer

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Aansluitingsonderzoek MAVO - eerste werkkring* (Co-ordination investigation MAVO /general education, secondary level/ to first job)

Responsible researcher: G. BRENNINKMEIJER

Number of research workers engaged in project: 2

Starting date: 1969

Probable completion date: 1971

Purpose: To gain insight into the allocation of students in the context of school variables and expectation, and experience variables in the first job.

Procedure: Test research, questionnaires, follow-up through interviews. The investigation aims at a description of the allocation and adaptation process of MAVO-graduates with regard to continued education, and first jobs. Major problems are found on the one hand in the field of vocational guidance and information, and on the other hand in personnel policy with regard to juveniles. Possible conclusions can also be drawn with regard to content and organisation of MAVO-education. Relations between certain personality and environmental factors, nature of the training or occupation chosen and the manner of functioning during the first year of this training or occupation will be studied.

D.2 *Beslissingsproject* (Selection project)

Responsible researcher: C. BRENNINKMEIJER

Number of research workers engaged in project: 7

Starting date: 1967

Probable completion date: Approximately 1971

Purpose: The study of transfer from primary school to secondary school in the Netherlands.

Procedure: Tests, scales, inquiries and assessments for data collection.

D.3 *Constructie en normering Prestatie Motivatie Test van kinderen (PMT-K)* (Construction of an achievement motivation test for children)

Responsible researcher: H.J.M. HERMANS

Number of research workers engaged in project: 2

Starting date: 1969

Probable completion date: End of 1970

Purpose: To develop an instrument to study the motivation of pupils from the 5th and 6th grades of elementary school and from transition classes.

Procedure: Questionnaire method, test book with electronic score and response form. Pupils of 120 primary and high schools are tested with the achievement motivation test for children (PMT-K) in order to obtain standards based on a representative sample of Dutch schools. The test has validity for the pupil's achievement and satisfaction in study.

D.4 *Motivatieverhoging* (Motivation development)

Responsible researcher: H.J.M. HERMANS

Starting date: 1969

Probable completion date: 1971

Purpose: To increase study motivation amongst pupils and at the same time to reduce fear of failure.

Procedure: A method of training is developed to increase the achievement motivation and to decrease the fear of failure. This training is given to groups of teachers, who apply the training inputs in the classroom. A restructuring of the classroom is stimulated and guided by the psychologist who functions as a change agent. Pre- and post-testing of achievement motivation, debilitating and facilitating anxiety is used to assess the effect of the method on the pupils. Control groups are part of the study.

XX. *Name of organisation:* INSTITUUT VOOR ONDERZOEK VAN HET WETENSCHAPPELIJK ONDERWIJS, KATHOLIEKE UNIVERSITEIT VAN NIJMEGEN (Centre for Research into Higher Education, Catholic University of Nijmegen)

Address: Graadt van Roggenstraat 6, Nijmegen

Director: Dr. J.F.M.C. Aarts

A. HISTORICAL

1. Year of foundation: 1967.

2. The necessity of undertaking systematic research into the development of university education led to the foundation of the Centre.

3. The Centre was founded on the initiative of a committee of the Faculty of Social Sciences and a committee of the Academic Council.

B. STATUS AND PROGRAMME

1. The Centre is connected with the University.

2. The Governing Board consists of approximately 10 members representing the university board and the respective faculties.

3. There are no divisions, sections, units, etc.

4. The staff consists of seven persons employed full-time in educational research.

5. Budget

1968	DFls. 42,600
1969	DFls. 55,900
1970	DFls. 62,400

Predominant source of finance: the university budget.

6. With regard to the training of teachers informative papers are compiled and discussion meetings and workshops are organised.

7. The Centre is not active in the training of researchers.

8. All research projects should directly pertain to scientific education, and furthermore be of importance to teachers, students and daily educational practice.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Onderwijs en studie in kleine groepen* (Small group education)

Responsible researcher: WAGENMAKERS, A. HORSTEN

Number of research workers enaged in project: 3

Starting date: January 1969

Probable completion date: December 1972

Purpose: Report on theory of the socio-psychological functioning including problem solving of instruction and study in small groups.

Procedure: Literature study, observation, development of a didactical scheme and an evaluation scheme. The investigation covers various disciplines (medicine, education, sociology, theology). Within these disciplines observations were carried out and the usefulness of various evaluation schemes was tested. Cluster and factor analysis were carried out on these schemes and described in an interim report.

D.2 *Doelmatig gebruik van onderwijs media in het wetenschappelijk onderwijs* (Application of educational technology in higher education)

Researchers: F. GASTHEWPER, A. HORSTEN, E. LINUM

Starting date: September 1970

Probable completion date: December 1972

Purpose: To investigate the functioning of response systems in dental training with the object of integrating theoretical, practical and TV-instruction.

Procedure: Registration of response on multiple-choice questions via punch-tape machines and processing by computer. Evaluative investigations of TV instruction in this relationship. Literature study.

D.3 *Doorstroming van studenten in het wo* (Student flow in university education)

Responsible researchers: J. AARTS, A. HORSTEN, H. TJIAM

Number of research workers engaged in project: 4

Starting date: September 1970

Probable completion date: December 1972

Purpose: Report on study progress.

Procedure: Analysis of student administration data, statistical methods (multivariance analysis), psychological measurement. The object of the investigation is to classify students with regard to the way in which they follow university education (drop-outs, variations in study rate). The relative importance of the categories, and their relations with a number of psychological characteristics as well as with data of former training are examined.

XXI. *Name of organisation:* PSYCHOLOGISCH LABORATORIUM RIJKSUNIVERSITEIT UTRECHT
(Psychological Laboratory, State University of Utrecht)

Address: Varkenmarkt 2, Utrecht

Director: Professor Dr. C.F. van Parreren

A. HISTORICAL

1. Year of foundation: 1924.

2. Reason for foundation: Appointment of the first professor of psychology.

3. The Laboratory was founded on the initiative of the governing board of the University.

B. STATUS AND PROGRAMME

1. The Laboratory is a university institute.

2. The Psychological Laboratory has a council where the scientific staff, non-scientific staff, students and the director are represented.

3. The following departments exist:

- Learning and memory
- Language psychology
- Perception psychology
- Psychophysiology.

4. Staff: No details available.

5. Predominant source of finance: the university budget and grants from foundations.

6. No teacher training is undertaken by the Laboratory.

7. Participation in the training of educational researchers is done within the context of training for the graduate level of psychology and pedagogy.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Praktische taalkunde in het brugjaar* (Psycho-linguistics applicable to 12- and 13-year-old pupils)

Responsible researchers: Interdisciplinary working group

Starting date: January 1970

Probable completion date: Mid 1973

Purpose: Development through empirical research of a psycho-linguistics instructional programme. The project arose from the growing need for programmes designed to eliminate or diminish the arrears in language command of children from certain social environments as compared to a "desirable" level of language command in secondary education. These arrears are not a handicap in the school alone, but restrict optimum participation in (mass) communication outside the school as well. Thus, the aim of the project is the search for new approaches to develop the language abilities and the implicated language understanding in this age group.

Procedure: Programming teaching/learning behaviour through successive approximation (B.F. Skinner).

A pre-determined learning objective is pursued with the aid of a teaching script for the teacher. Attention is given to the 12-13 age group to protect these children from a situation in which efforts to improve language command are concentrated on children from 5-6 years of age and in which older pupils are left to their own devices. Concrete form will be given to the language understanding in a repertory of skills that will be taught to pupils in a systematic and explicit way. Above all, a learning procedure with algorithmic instructions, as developed by L.N. Landa, is considered. The problem of the "teachability" of teaching/learning material, and the actions required, take a central position. Various variants of a teaching script (elaborate teachers' guide) will be tried. The following theories will be chosen as starting points:

1. socio-linguistic theory, B. Bernstein;
2. learning theory, C.F. van Parreren;
3. learning theory, P. Gal'perin (USSR).

D.2 *Denktraining met behulp van schaakonderwijs* (The effects of chess instruction on solving other problems)

Responsible researchers: J. PEECK, R.W.F. UHLENBECK

Number of research workers engaged on project: 4

Starting date: Early 1971 (preparations started in February 1970)

Probable completion date: July 1972

Purpose: It will be investigated whether learning to solve chess problems, utilising heuristic instructions, has a positive effect on the solving of problems of a different nature.

Procedure: (a) experiment with the aid of group instruction;
(b) questionnaire.
Approximately six 5th forms of elementary schools will receive twice a week (total 20 lessons of 50 minutes) group instruction in simple chess games according to heuristic methods. This training will be preceded and followed up by control tests in which six other control groups, matched with regard to IQ and socio-economic environment, will participate as well. Control tests will consist of a number of problems ranging from "very similar to chess" and "very little similarity with chess".

D.3 *Engels in het basisonderwijs* (English in primary education)

Starting date: November 1968

Probable completion date: January 1971 (first phase)
Investigation of experimental transfer to the schools to start in 1971

Purpose: Development of a transferable didactical model for the introduction of English as a subject in Dutch primary schools.

Procedure: The programming of teaching behaviour by means of successive approximation (B.F. Skinner).
The desired teaching objective is pursued by means of a so-called scenario for the teacher. (The transferability is tested in empirical investigation.)

XXII. *Name of organisation:* INSTITUUT VOOR CLINISCHE EN INDUSTRIELE PSYCHOLOGIE RIJKSUNIVERSITEIT UTRECHT
(Institute of Clinical and Industrial Psychology, State University of Utrecht)

Address: Trans 4, Utrecht

Director: Professor Dr. J.H. Dijkhuis

A. HISTORICAL

1. Year of foundation: 1949.

2. The development of the clinical and industrial branches of psychology led to the foundation of the Institute.

3. It was founded on the initiative of Professor Dr. D.J. van Lennep.

B. STATUS AND PROGRAMME

1. The Institute is connected with the Sub-Faculty of Psychology.

2. The Governing Board consists of 10 members and the Directing Board of three. Its functions are administrative and executive. The academic staff, non-academic staff and students are represented on the Boards.

3. The following sections exist:

- Mental health
- Differential psychology
- Work-psychology in industry.

4. Number of personnel: 13.

5. Budget

1968	DFls. 68,144	)	Exclusive of cost of
1969	DFls. 99,770	)	housing and personnel
1970	DFls. 91,360	)	costs

Predominant source of finance: the university budget.

6. The Institute participates in teacher training at the post-graduate level.

7. Participation in the training of educational researchers: courses, supervision of trainees and on the execution of research projects.

C. MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

Fear of failure and appraisal of structure in teaching situations

Responsible researchers: L. BEYAERT-KOHLER, W. KRUITHOF,
P. van der LINDEN, A. van HILTEN

Number of research workers engaged in project: 8

Time spent on project: September 1969 - August 1970

Purpose: To discover how best to advise students, who experience fear of failure, concerning the form of instruction best suited to them at university.

Procedure: Measurement of a possible predictor (fear); presentation of two forms of instruction; measurement of appreciation in both forms (Aptitude-Treatment-Interaction model).

Of six groups of about 11 students each - taking a regular course in psychology (third-year students) - three were assigned to a structured programme, and three to a less structured programme. Structure was effected by different instructions to the group discussion leaders. Hypothesised was that students with a high degree of anxiety would prefer a structured programme. Anxiety was measured by the PMT (Hermans 1967). Preference was measured by a questionnaire.

Conclusions: Results show a reverse relationship: Highly anxious students expressed more satisfaction with the less structured programme, less anxious students preferred the more structured programme.

XXIII. *Name of organisation:* AFDELING ONDERZOEK EN ONTWIKKELING VAN ONDERWIJS VAN DE RIJKSUNIVERSITEIT UTRECHT (Educational Research and Development Section, State University of Utrecht)

Address: Herenstraat 33, Utrecht

Directors:

Drs. A. Maris,	Director for Educational Research
Drs. G.W. Ackers) Drs. J. Blom)	Managers for Educational Development

A. HISTORICAL

1. Year of foundation: 1965.

2. The reason for the foundation of the Section was the need for educational innovation within the University of Utrecht.

3. The Section was founded by the University.

B. STATUS AND PROGRAMME

1. The Section is a centre within the University, and is primarily a service division for the faculties and disciplines of the University. There is a financial link with the State University.

2. Governing board: no information available.

3. The Section has the following sub-divisions:

- Research and development
- Innovation and change
- Data processing and educational statistics.

4. The staff consists of 18 persons, of whom eight are part-time researchers.

5. Budget

1970	DFls. 55,000	exclusive of personnel cost, cost of housing, equipment, etc.

Source of finance: the university budget only.

6. The Section participates in teacher training by organising incidental courses.

7. Programmes are organised for the training of researchers.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Ontwikkeling van standaardprocedures voor de constructie van onderwijssystemen* (Development of standard procedures for the construction of teaching-learning systems)

Researchers: A. DIJKSTRA-KRUIT, F.E. HUBER, J.K. OOSTHOEK

Starting date: March 1970

Probable completion date: 1st phase, January 1972

Purpose: 1st phase: development of simple standard procedures for the analysis of objectives in curricula.

Procedure: Development of procedures in field settings; group interviews with teachers, eg based on Bloom's taxonomy; inquiries; statistical analysis techniques.

D.2 *Studiebestedingsonderzoek* (Investigation of the use of study time)

Researchers: S.E.M. EVERWIJN, A.J.J. WILLEMSEN, J.H.A. de VREDE

Starting date: 1968

Probable completion date: 1971

Purpose: To establish (a) the validity of research methods; (b) the manner in which students use their study time; (c) correlations with personality variables; (d) a guide indicating the best methods to be employed.

Procedure: (a) longitudinal sample; (b) transversal sample; (c) paired comparisons; (d) magnitude estimation; (e) absolute estimation.

XXIV. *Name of organisation:* INSTITUUT VOOR TOEGEPASTE TAALKUNDE DER RIJKSUNIVERSITEIT TE UTRECHT
(Institute of Applied Linguistics, State University of Utrecht)

Address: Wilhelinapark 11, Utrecht

Director: Dr. J.A. van Ek

A. HISTORICAL

1. Year of foundation: 1965.

2. Reason for foundation: To promote the modernisation of the teaching of modern foreign languages.

3. The Institute was founded on the initiative of the University.

B. STATUS AND PROGRAMME

1. The organisation is a university institute.

2. It has no board of its own.

3. There are no divisions, sections, etc.

4. Five persons are working with the organisation.

5. Predominant source of finance: the university budget.

6. The Institute participates in the training of teachers by means of lectures on "applied linguistics in relation to the problems of teaching modern foreign languages".

7. Participation in the training of educational researchers is by means of lectures.

8. Aims and fields: Research in the field of problems in the teaching of modern foreign languages.

C. MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

A television French course and its evaluation

Researcher: A.E.H. TONKENS

Time spent on project: November 1968 - June 1969

Purpose: Research into the effectiveness of a television course and the possibilities of testing by means of television.

Procedure: Group observation (pilot groups).

Conclusions: Information on two pilot groups, the participants in which followed the television course in the language laboratories of the Institute of Applied Linguistics, made research possible into the progress made during the broadcasting.

Results:
written comprehension - notable progress
oral expression - slight progress
aural comprehension - notable progress
knowledge of grammar - notable progress
pronunciation - progress

Testing by means of television was carried out three times over a representative group (2000) and proved the effectiveness of the course in comparison with the results of a great number of tests that were taken by the members of the pilot groups.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Engels bij het basisonderwijs* (English in primary education)

Researchers: P.J.M. GROOT, J.J. de ROOY

Starting date: September 1968

Probable completion date: June 1971

Purpose: Investigation of the problems relating to the introduction of English in primary education, in particular: instruction; teaching aids; evaluation.

Procedure: This project is a joint activity of the Psychological Laboratory and the Institute of Applied Linguistics. The Institute is mainly concerned with research into three areas: (1) teacher training, (2) didactic aspects and (3) testing.

1. Teacher training:	linguistic training, training in language didactics, selection criteria.
2. Didactic aspects:	criteria for textbooks, textbook-guided teaching, classroom activities (games, etc).
3. Testing:	measuring through objective test of the results, developing new testing techniques for measurement.

D.2 *Ontwikkeling van luistervaardigheidstoetsen Duits, Engels en Frans voor eindexamenniveau vhmo en havo* (Development of listening comprehension tests in German, English and French at graduation level of schools for secondary general education, higher level)

Responsible researchers: J.A. van EK, P.J.M. de GROOT

Number of research workers engaged in project: 7

Starting date: 1969

Probable completion date: 1972

Purpose: Investigation of the nature of listening comprehension in foreign languages; investigation of the method to test objectively this listening comprehension.

Procedure: Testing by means of three sub-tests (vocabulary, grammar, phonology) is not a valid procedure, because: (a) the relative importance of each of these factors to the "total skill" is unknown; (b) it excludes "extralinguistic" factors, such as reasoning, attention, memory, etc.
In this project the development of second language listening comprehension tests was started. These tests measure the "total skill" as accurately as possible. Statistical and empirical evidence has shown these tests to be reliable and valid. They can now be used as yardsticks for measuring the relative importance of the various components that constitute the model of listening comprehension used, such as vocabulary, phonology, grammar, memory, attention, etc. These components will be isolated and tested through the various sub-tests. The correlation coefficients of these sub-tests and the "total command" test will then be calculated.

D.3 *Didactische problemen bij het uitspraakonderwijs aan studenten in de Franse taal* (Didactical problems in teaching phonetics to students of French)

Number of research workers engaged in project: 8

Starting date: May 1967

Probable completion date: 1971

Purpose: To find out whether by a short and intensive course a stage of self-correction in pronunciation is attainable.

Procedure: Intensive course of phonetics by means of an audio-active-compare (AAC) language laboratory.
The hypothesis is that the teaching goal of a course of foreign phonetics for students (prospective teachers) should be: a speedy attainment of a stage where the students distinguish failures in pronunciation and correct these themselves. To this end a course is designed by researchers. The students attend the 3-week course for about two one-hour sessions per day. The course is directed at critical listening and at cultivating self-correction. Based on tests, inquiries, interviews and observations, an attempt is made to gain an insight into the problems and possibilities of this learning-process.

XXV. *Name of organisation:* WERKGROEP ONDERZOEK VAN ONDERWIJS TECHNISCHE HOGESCHOOL DELFT
(Educational Research Working Group, Technological University of Delft)

Address: Mijnbouwplein 11, Delft

Director: Dr. J. Vastenhouw

A. HISTORICAL

1. Year of foundation: 1968.

2. Reason for foundation: to promote interaction between educational practice and educational research; to carry out educational research for advice and guidance in the field of education.

3. The Educational Research Working Group was founded on the initiative of the governing board of the University.

B. STATUS AND PROGRAMME

1. The Educational Research Working Group is a university institute.

2. The Board consists of 24 members representing all departments of the University. Functions: Solving of problems with regard to educational research; administration procedures.

3. There are no divisions, sections, etc.

4. Six persons are employed by the Institute, of whom five are part-time researchers.

5. Budget

1968	DFls. 6,000)	
1969	DFls. 10,800)	personnel cost excluded
1970	DFls. 20,500)	

Predominant source of finance: the university budget.

8. Aims and fields of activities: The promotion of interaction between the teaching field and educational research.
The conducting of educational research for advice and guidance in the field of education.

C. MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

Onderzoek technische natuurkunde (Investigation into technical physics)

Researchers: A.D. WOLFF-ALBERS, J. VASTENHOUW

Time spent on project: September 1968 - September 1970

Purpose: Investigation of experiments with the term system (3 months). Trial investigation September 1969: data collection on prospective students that could influence the effectiveness of the first year of training. The aim of the search for information on students at the beginning of their studies is two-fold: (a) to provide the department with a better insight into possible causes of a satisfactory or otherwise effect of the first year of training; (b) to be able to forewarn students that are likely to get into difficulties with their studies.

Procedure: Tests, introduction of experimental variables, questionnaires, follow-up of the 1968-69 investigation.
Initial knowledge in the field of mathematics and physics was tested by means of two internationally used UNESCO tests adapted in co-operation with the teachers concerned.
In addition two personality tests were taken. Test results and explanations were made available to students. The department was provided with the group results. The relation between these data and study results will be examined. In March 1970 discussions with the complete staff of the physics laboratory were held in order to assess the possibilities of conducting relevant investigations in the third term. The following subject areas were chosen: "Project tests" and "Laboratory assistance". Both subjects were worked on by groups consisting of laboratory staff members and members of the Research and Development Section of the Educational Service. "Project tests" were evaluated with the aid of questionnaires and interviews among students and staff. The "Laboratory assistance" investigation led to the organisation of an assistants' conference (August-September 1970). The aims of this conference were: (a) confrontation of laboratory assistants with the didactical aspects of their task; (b) critical reflection by both staff members and assistants on laboratory content and organisation.

Conclusions: The 1968-69 investigation supplied the major conclusion that in both years the majority of the students questioned favoured an academic year in which lectures are stopped during examination weeks and the number of subjects to be studied simultaneously is reduced. This led to the request by the department's education committee to continue the experiments with the term system.
At the end of the follow-up it became evident that a proposal to concentrate the investigation on the programme of the first year of training is not feasible for some time to come.

D. MAJOR RESEARCH PROJECT IN PROGRESS

Motievenonderzoek ivm studiekeuze (Motivation investigation in connection with choice of training)

Responsible researcher: J. VASTENHOUW

Number of research workers engaged in project: 2

Starting date: 1968

Probable completion date: Unknown

Purpose: Analysis of motives in choice of training in relation to the image the prospective student has of a department.

Procedure: Inquiry.

XXVI. *Name of organisation:* GROEP ONDERWIJSRESEARCH TECHNISCHE HOGESCHOOL, EINDHOVEN
(Educational Research Group, Technological University of Eindhoven)

Address: PO Box 513, Eindhoven

Director: Dr. W.A.T. Meuwese

A. HISTORICAL

1. Year of foundation: 1963.

2. Reason for foundation: The need for research to gain an insight into the way in which innovation can be realised.

3. The Institute was founded on the initiative of Professor Dr. K. Posthumus.

B. STATUS AND PROGRAMME

1. The Institute is connected with the University.

2. It has no board of its own.

3. There are no divisions, sections, etc.

4. Nine persons are employed by the organisation, of whom eight are full-time and one part-time.

5. Budget

1968	DFls. 10,000)	personnel cost not included
1969	DFls. 11,000)	
1970	DFls. 16,000)	

Predominant source of finance: the university budget.

6. No teacher training is undertaken.

7. Research opportunities exist for trainees of the social science faculties.

8. Aims and fields: Research and development of curricula which (a) allow individualised instruction, (b) can be automated, (c) are directed towards problem-solving.

C. MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

Effect van studiebegeleiding (The effect of study guidance)

Researcher: E. KLIP

Time spent on project: 1967-70

Purpose: Investigation of the effect of study guidance in small groups on study results, study methods, etc.

Procedure: Comparison between an experimental group and a control group; random interaction examination.

Conclusions: An experimental and a control group of ± 60 first-year students in mechnical engineering were compared on grades, and scores on tests for motivation, attitude, adjustment, study behaviour, value system and perception of educational environment. The experimental group was tutored by graduate students in groups of 3 or 4. The tutors used a method of guided discovery in mathematics and mechanics.
A number of interactions were found between intelligence and introversion on the one hand and the effect of experimental conditions on grades on the other hand. This part of the study gave a number of clues for differentiated instruction.
Relationships between ability and personality characteristics of the tutor and achievement and behavioural change of his group were also investigated. There was a correlation between the intelligence of the tutor and the achievement of the group. Certain personality characteristics of the tutor were related to change in value judgments among the members of the group.

Bibliographical reference:

Klip, E.C. *Studiebegeleiding aan eerstejaarsstudenten* (Study guidance of first-year students) Wolters-Noordhoff, 1970.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

Parameters of instruction in technical problem-solving

Researcher: W. VAAGS

Starting date: 1970

Probable completion date: 1974

Purpose: Investigation of the factors influencing instruction in technical problem-solving.

Procedure: Experiment; computer simulation.

In connection with a course in advanced Technical Mechanics (the mechanics of vibration and balance) a number of experiments are being designed to study: (1) relationships of environmental factors on technical problem-solving and transfer; (2) characteristics of the problem-solving process in this area; (3) problem-solving in a simulated complex environment.

D.2 *Self-paced study programme in Technical Mechanics*

Responsible researcher: H. TIELENS

Number of research workers engaged in project: 3

Starting date: 1968

Probable completion date: 1973

Purpose: Individualisation and automation of first-year instruction in mechanical engineering.

Procedure: Analysis of objectives; curriculum construction; test construction; computer-monitoring.
A first-year semester course in Technical Mechanics was constructed as a self-paced system. Behavioural objectives were defined in advance, and the course was divided into 13 units. Each unit consists of: (1) a statement of objectives for that unit, (2) references to study material, (3) a written text, (4) study questions, (5) six parallel unit tests.
Each student studies a unit. Feedback on results is given on the basis of the unit tests.
The system is being evaluated by: (1) analysis of the unit tests, (2) ratings of elements of the course material, (3) questionnaires about the study process, (4) recording of student's behaviour. Relationships will be sought between parameters of the system, study process and output.

XXVII. *Name of organisation:* CENTRUM VOOR DIDACTIEK EN ONDERZOEK VAN ONDERWIJS AAN DE TECHNISCHE HOGESCHOOL TWENTE (Centre for Educational Research and Development, Technological University of Twente)

Address: PO Box 217, Enschede

Director: Drs. C.F. van der Klauw

A. HISTORICAL

1. Year of foundation: 1965.

2. Reason for foundation: to support the educational policy and educational practice of the University by means of research and advice.

3. The Institute was founded on the initiative of the governing board of the University.

B. STATUS AND PROGRAMME

1. The Institute is connected with the University.

2. The Board consists of 10 members representing departments and divisions of the University.

3. There are no divisions, sections, etc.

4. 10 persons are employed by the Institute, of whom seven are part-time researchers.

5. Predominant source of finance: the university budget.

6. The Institute participates in teacher training by courses and workshops.

7. The Institute participates in the training of educational researchers by enabling trainees to take part in research projects.

8. Aims, fields and methods:

- Evaluation of education;
- Testing of new forms of instruction and methods;
- Detection of factors influencing the effectiveness of education (eg talent, motivation, etc);
- Research into the optimum conditions for instruction and learning processes;
- Development of instruments and methods of investigation for educational research.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Individualisering eerstejaars wiskundeonderwijs* (Individualising mathematical course for freshmen)

Researcher: Tj. PLOMP

Starting date: Autumn 1969

Probable completion date: Unknown

Purpose: Development of a form of individualised instruction directed towards the improvement of study methods, student attitude, etc.

Procedure: Development (design, application, evaluation, feed-back) of the course. Development of tests (measurement of results). Questionnaires (measurement of satisfaction).

D.2 *Ontwikkeling van een cursus Leesvaardigheid voor studenten* (Development of a reading improvement course for students)

Researchers: B.H.A.M. van HOUT-WOLTERS, J.L.C. van den STAAK, W. VIJN

Starting date: January 1970

Probable completion date: December 1971

Purpose: Development of a reading improvement course based on sound pedagogical and learning theory principles.

Procedure: Development and evaluation of measuring tools.

D.3 *Cursus ontwerpen I voor eerstejaars* (Engineering design course for freshmen)

Researchers: C.T.C.W. METTES, J.F.M.C. van HOUT

Starting date: guidance project: September 1969
research project: September 1970

Probable completion date: 1972 or 1973

Purpose: To assist in improving the course with regard to goal formulation, form, assessment, evaluation; to arrive at a course based on sound pedagogical principles by means of scientific social research. Particular emphasis will be placed on research into the relation between group functioning, teacher role, behaviour and creativity.

Procedure: Development of an observation scale for teacher behaviour; interviewing the teachers concerned with respect to role activities; inquiry among the participating students about satisfaction, goal perception, teacher behaviour, role definition; study groups of teachers (to formulate operational goals, terminal tests, particularly an adequate creativity test).

XXVIII. *Name of organisation:* STICHTING INTERUNIVERSITAIR INSTITUUT VOOR SOCIAAL-WESTENSCHAPPELIJK ONDERZOEK (SISWO) (Netherlands Universities' Joint Social Research Centre)

Address: O.Z. Achterburgwal 128, Amsterdam

Directors: Drs. J.C.M. Sterk, General Manager

Dr. M.A.J.M. Matthijssen, Head of the section for research in higher education

A. HISTORICAL

1. The Institute was founded in 1960, the research section in 1965.

2. Reason for foundation: to fulfil the need for research in higher education.

3. The Institute was founded on the initiative of the governing board of SISWO.

B. STATUS AND PROGRAMME

1. The Institute is an inter-university institute.

2. The Board consists of 20 members and determines the general policy of the SISWO organisation. All university institutes of sociology, socio-geography and town and country planning are represented on the Board.

3. The Institute forms one unit, namely for research in higher education.

4. Six persons are employed by the organisation.

5. Budget

1968	DFls. 571,670
1969	DFls. 653,059
1970	DFls. 707,000

Predominant source of finance: subsidy from the Ministry of Education and Sciences.

8. Aims, fields and methods: Objectives and structures of education (mainly higher education); literature study and field research (observation, interviews, questionnaires).

C. MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

C.1 *Samenwerking onder universiteitsdocenten; een vergelijkend onderzoek in 17 kandidaatsopleidingen* (Co-operation among university teachers; a comparative study of 17 graduate courses)

Responsible researchers: A.A. WESSELINGH, M.A.J.M. MATTHIJSSEN,
Sj. FORTUIN

Number of research workers engaged in project: 4

Time spent on project: May 1968 - December 1970

Purpose: Tracing of sociological features in the functioning of the teacher organisation as points of application for effective functioning.

Procedure: Inquiries by means of structured questionnaires, item-total analysis, computer processing.

The subject of the investigation is the co-ordination among the teaching staffs of training organisations within the university. It concerns the first phase of the training course for the "kandidaats-examen" (which may be roughly described as a Dutch equivalent of the examination for a BSc degree). Four faculties were involved, each of which was represented by three to five different training units from different universities: chemistry (5 units), law (5), economics (3) and English philology (4). The project is an inter-university comparative investigation, spread over 17 training units.

The research design is based on several presuppositions, conditions to be fulfilled by the teaching staff of training organisations in order to function as an integrated social unit. The variables used refer to: freedom in the work situation, planning, the decision-making process, the pattern of communication, normative orientation, evaluation of co-ordination among the teachers, etc.

The question is what is the position of each training unit viewed against the background of all the units of the same faculty.

Conclusions: Some factors turn out to be of importance for the functioning of complex training organisations as a whole, for instance, the structure of the organisation, based on subjects(professorial chairs) and the great differences between teachers of various ranks (from professor to assistants). An interim report has been sent to almost all the participating units.

General results and conclusions are not yet available. The publication of a summary report is under consideration.

C.2 *Studenten als beoordelaars van het onderwijs - een onderzoek in kandidaatsopleidingen van 4 studierichtingen* (University students as judges of curricula /graduate level/ in 4 disciplines)

Responsible researchers: Sj. FORTUIN, M. MATTHIJSSEN, A. WESSELINGH

Number of research workers engaged in project: 4

Time spent on project: January 1968 - September/October 1970

Purpose: To gain insight into factors influencing the effectiveness of university "kandidaats" training; to find starting points for improvement.

Procedure: Questionnaire method (structured). This project was carried out in order to discover the main factors governing effectiveness in university education, ie up to the "kandidaats" level (comparable to the graduate level), from which suggestions for innovation should evolve. The project dealt with:

1. students' perception of the curriculum in the actual educational environment, the nature of courses, educational styles, etc, and
2. a qualitative judgment of the educational environment in a wider sense. Both perception and qualitative judgment have been assessed in terms of five categories: (a) comprehensibility of courses and educational environment; (b) degree of pressure exerted on study behaviour in order to control the progress of all students enrolled; (c) level of difficulty in the curriculum; (d) social climate and involvement of teachers; (e) degree of stimulation to promote good performance among students.

Field of investigation: Four disciplines, namely chemistry, law, economics and English language and literature, each represented by four (or five) departments, were involved. The sample consisted of approximately 150 students (mainly undergraduates) in each of the 18 departments.

Conclusions: The results of the project are discussed in four reports, one for each discipline. In each report distinctions are made between departments on the one hand, and between freshmen, other undergraduates and postgraduates on the other.

From the perspective of a general concept of important conditions which should be fulfilled in undergraduate education the perceptions by the students of the curricula are not very positive. This is true for "comprehensibility" and "involvement of teachers". Furthermore, the perception of actual "pressure on study behaviour" and "stimulation" suggests the necessity of improvements. A general factor in conceiving curricula appears to be basic to the perceptions in these four categories. The "level of difficulty" is an almost independent category. On the average, older students score lower on all of the five dimensions.

Success in studying can be attributed much more to students' own capacities (ie S-factors) than to characteristics in the curriculum (C-factors). This holds for S-factors in general as well as for the five specific categories. Older students tend to be somewhat more positive about the significance of S-factors. There is a slight correlation between C-scores and perception scores within each category. Students with a relatively positive perception of the curriculum may also tend to attribute more of their success in studying to curriculum factors. Some implications of these findings are discussed. It is stressed that improvement of the curricula should start from a concept in which factors in the curriculum and in the students are integrated. Close co-operation between teachers and students is a prerequisite.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Begeleiding experimentele onderwijsstructuren* (A study of an experiment in self-government in higher education)

Responsible researchers: M.A.J.M. MATTHIJSSEN, T.J. de JONG

Number of research workers engaged in project: 5

Starting date: September 1969

Probable completion date: Approximately December 1971

Purpose: Description, if possible evaluation, of the experimental educational structure in the Sub-Faculty of Psychology of the State University of Groningen.

Procedure: Literature study; interviews (personal); group discussions; questionnaire; observation.

Exploratory description of the Sub-Faculty of Psychology of the State University, Groningen.

Methods: Analysis of documents, structured questionnaire, open interviews, observation.

Field: Three "sectors" (groups of about 30 persons, including both students and teachers, chosen from the Sub-Faculty of Psychology); total about 75 persons.

D.2 *Programma voor sociologisch onderzoek van het onderwijs* (Programme for sociological educational research)

Responsible researcher: M. MATTHIJSSEN

Number of research workers engaged in project: 11

Starting date: January 1970

Probable completion date: Spring 1971

Purpose: Development of a long-term programme.

Procedure: (a) Literature study in order to determine gaps in knowledge; (b) In concert with a working group of Dutch educational sociologists, development of a programme of themes to be investigated.

XXIX. *Name of organisation:* CENTRAAL PLANBUREAU
(Central Planning Bureau)

Address: Van Stolkweg 14, The Hague

Director: Professor Dr. C.A. van der Beld

A. HISTORICAL

1. Year of foundation: 1945.

2. Reason for foundation: the need for a more systematic socio-economic policy in the Netherlands.

3. The Bureau was founded on the initiative of the Central Government.

B. STATUS AND PROGRAMME

1. The Bureau is a government organisation. There are links with the universities in the Netherlands. The director and the deputy director have professorial rank.

2. There is no board.

3. The Bureau has various sections among which is the main section for social and regional planning containing the education section.

4. 114 persons are working with the Bureau.

5. Budget

1968	DFls. 3,286,000
1969	DFls. 3,849,300
1970	DFls. 4,411,400

The Bureau is financed by the Ministry of Economic Affairs.

6. No participation in the training of teachers and educational researchers is undertaken.

8. Aims and fields:

a. To advise the Government and the public about future development of education and the economic aspects of education.
b. Economic aspects, ie
    inputs: expenditure, teachers, material provisions, investments.
    throughputs: pupils.
    outputs: skilled manpower.
c. Statistical analysis.

C. MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

C.1 *De constructie van een onderwijsmodel* (The construction of an educational model)

Time spent on project: June 1967 - June 1970 (first phase)

Purpose: Construction and formal description of a prognostic model for the educational system based on the education matrix.

Procedure: Literature study, experiment and discussion.

Conclusions: In the first phase of the project the possibilities and limitations of the education matrix for forecasting purposes on the short and medium term have been investigated. The model constructed consists of three sub-models, viz a student flow model, a manpower supply model and an expenditure model. The first forecasts the future numbers of pupils by type of school, the second the labour force by educational level and the third model gives forecasts of expenditure for education.

Computer programmes have been written and each of the sub-models has been tested and applied.

Bibliographical reference:

Thoolen, B.A. *Some problems of SOM models*, Centraal Planbureau/OECD, 1970.

C.2 *De opleidingsstructuur van de beroepsbevolking* (The educational structure of the working population)

Number of research workers engaged in project: 2

Time spent on project: May - June 1969

Purpose: Confrontation of the labour demand from the various training levels with the educational output.

Procedure: Statistical analysis. The starting point for the assessment of the supply side was the information from the 1960 Census.

For that year the working population is broken down by educational level and by age. By means of the education matrix a flow of school leavers by educational level could be estimated. Estimates of the inflows into the working population together with estimates of outflows on account of death, retirement, etc, produce the net addition to the working population by educational level. Demand was estimated on the basis of global econometric relations between the demand for educated manpower by five levels and the general economic indicator.

Conclusions: One of the conclusions was that the present shortage of unskilled workers would persist, despite a large immigration of unskilled workers. Because of the large expansion of education, the unskilled worker disappears faster than unskilled work.

A study on regional differences in supply and demand indicates that in the northern and eastern regions approximately the same tendencies are present as in the other regions, but in addition these regions face a relative shortage of highly skilled manpower.

C.3 *De ontwikkeling op lange termijn van het onderwijs* (The long-term development of education in the Netherlands)

Number of research workers engaged in project: 9

Time spent on project: May - October 1967 and March - May 1969

Purpose: An exploration of the possible long-term development of education in the Netherlands.

Procedure: Analysis of past developments; construction and adaptation of models describing long-term development. In order to get some global estimates of future numbers of pupils, four different forecasting methods have been used. The first is based on extrapolation of trends. The second approach is an application of the education matrix. In the third the influence of a possible further democratisation is investigated. The last approach uses the findings of an international analysis to forecast the future numbers of pupils.

Conclusions: The resulting development of the required numbers of teachers and of expenditure on education shows a gigantic expansion. The conclusion was that if other fast expanding, financially demanding items are added, implementation is impossible as the total surpasses the financial and manpower resources. This means that without co-ordinated social and economic planning, adequate planning of education will be impossible.

Bibliographic reference:

Thoolen, B.A. and Ruiter, R. *The long-term Development of Education in the Netherlands,* Centraal Planbureau/OECD, 1969.

C.4 *Analyse van de onderwijsuitgaven* (Analysis of educational expenditure)

Time spent on project: January - May 1969

Purpose: Analysis and description of the trend in government expenditure on education as from 1950.

Procedure: Statistical analysis.

Conclusions: By means of factor analysis the development of educational expenditure was explained by the various factors which influenced it, such as pupils, pupil-teacher ratio, prices, etc. It turned out that independent factors play an overwhelming role. The conclusion was that "post-war policy-makers in education can only be credited with (or blamed for) about 10% of the increase in the educational budget". From a long-run analysis, a declining flexibility in educational expenditure in relation to gross national product was noted. This means that there exists a tendency towards a certain limit of the share of educational expenditure in the Gross National Product (GNP).

Bibliographical reference:

Passenier, J. and Ruiter, R. *Expenditure on education in the Netherlands,* Centraal Planbureau/OECD, 1969.

C.5 *Het rendement van het onderwijs* (The output of education)

Number of research workers engaged in project: 3

Time spent on project: April - November 1968

Purpose: To estimate the private and social output of various forms of education.

Procedure: Statistical analysis.

Conclusions: A cost-benefit analysis was made of various types of education in the Netherlands. On the basis of information on the relation between the income and age of persons with various educational levels one can calculate the total income that a person with a certain educational level can earn during his productive life. When this amount is compared with the costs of his education, an insight is gained into the economic output. Two kinds of output can be distinguished: private and social. In the first approach cost and benefit are measured from the standpoint of the individual; in the second one the standpoint of society is chosen.

Apart from differences between educational levels, great differences were found between mean private output (about 10%) and mean social output (about 7%). Various alternative types of analysis have been carried out and comparisons have been made with results of other analyses which were available for other countries.

Bibliographical reference:

de Wolff, P. en Ruiter, R. *De economie van het onderwijs,* Vereniging voor de Staathuishoudkunde, 1968.

C.6 *Ontwikkeling uitgaven voor wetenschappelijk onderwijs* (The development in expenditure on university education)

Number of research workers engaged in project: 2

Time spent on project: August - November 1968

Purpose: Investigation of the financial feasibility of the estimated expansion of university education.

Procedure: Statistical analysis.

Conclusions: In the report *Numbers of university graduates up till 1980, supply and demand* of the Committee for Statistical Investigation of the Academic Council (Chairman Professor Dalmulder), it was estimated that the number of students would double between 1965 and 1980. Some of the reactions to this report were that an expansion of this kind would be impossible.

Analysis of the necessary expansion in investments and in current expenditure revealed that this expansion would certainly be possible if investment remained at a high level.

Bibliographical reference:

Passenier, J. *Dalmulder en de uitbreiding van het wetenschappelijk onderwijs*, Econ. - Stat. Berichten, 6 November 1968.

C.7 *Aanbod en behoefte aan Academici* (Supply of and demand for university graduates)

Purpose: Estimates of the supply of and social need for university graduates.

Procedure: Statistical analysis and discussions in committees. The Ministry of Education and Sciences wants to be regularly informed whether certain developments in university education are in line with the need of society for highly skilled manpower. The Committee for Statistical Investigation of the Academic Council has been asked to study the problem. By means of the manpower supply model various alternatives are worked out for the supply of skilled manpower. Demand is estimated on the basis of global relations.

Conclusions: In Project A supply of and demand for university graduates were confronted for all types of disciplines. The conclusion was that in individual disciplines both under- and over-production could be expected.
Project B dealt with doctors. Here the conclusion was that despite uncertainties the best policy is a regular increase in the capacity of medical faculties.
The conclusion of Project C was that a start has to be made with the establishment of a second faculty of civil engineering.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Analyse van onderwijsmatrices* (Analysis of education matrices)

Starting date: June 1967

Purpose: To arrive at an explanation of the pupil flow through the educational system as a basis for forecasts.

Procedure: Collection and processing of statistical data concerning pupil flow per course year; analysis of flow coefficients by means of tables, diagrams, regression analysis.

The education matrix is a tool for forecasting the future numbers of pupils and graduates. It gives a systematic survey of the flow of pupils through the educational system. The analysis of this flow, according to sex and grade, should lead to the assessment of relations by which forecasts of the future development of flow coefficients can be made.

D.2 *Aanbod van en behoefte aan hts'ers* (Supply of and demand for college engineers)

Starting date: March 1968

Probable completion date: Beginning of 1971

Purpose: Study of (a) the supply of and social demand for college engineers and (b) the training capacity.

Procedure: Statistical analysis, inquiries, discussions in committees.

In view of the relatively low student numbers in technical colleges and the uncertainties about the future demand for college engineers, a committee was set up to advise the Minister for Education on future policy.

To get an insight into the opinions in industry, a survey was done in which the opinions of 50 leading firms were sought on the job opportunities and the future demand for college engineers. Various alternatives on the supply side are worked out by means of the education matrix and the manpower supply model. Demand will be estimated on the basis of the survey and of global econometric relations.

D.3 *De spreiding van het wetenschappelijk onderwijs* (Regional dispersion of university training)

Starting date: October 1968

Probable completion date: Beginning of 1971

Purpose: To estimate the numbers of students per university training institution up to 1980.

Procedure: Statistical analysis.

In the report of the Committee for Statistical Investigation of the Academic Council, *Numbers of university graduates up to 1980, supply and demand* (1968), forecasts are given of the numbers of university students per discipline up to 1980. The present project is directed towards the assessment of the regional dispersion of students per university and discipline. A dispersion model has been constructed, the coefficients of which are being analysed for the past. The next step is to make forecasts of students by region and the choice of university.

XXX. *Name of organisation:* CENTRAAL BUREAU VOOR DE STATISTIEK
(Netherlands Central Bureau of Statistics)

Address: Oostduinlaan 2, The Hague

Directors: Dr. J.Ch.W. Verstege, Director-General
Professor Dr. G. Goudswaard, Deputy Director-General
C.A. Oomens, Director for Statistics Co-ordination

A. HISTORICAL

1. Year of foundation: 1899.

2. Reason for foundation: To obtain statistical data for scientific or practical purposes.

3. The Bureau was founded on the initiative of the central Government.

B. STATUS AND PROGRAMME

1. The Bureau is a government organisation.

2. The Board consists of 50 persons representing science and socio-economic life and the various ministries. Its function is the establishment of the programme of activities.

3. There are 21 sections spread over three categories, viz

- General sections,
- Financial and economic sections,
- Socio-cultural sections, among which the section for educational statistics.

4. In the main section of educational statistics 18 persons are employed, 14 of whom are full-time and 4 part-time.

5. Budget

1968	DFls. 27,000,000)	5% of the budget is used for educational research
1969	DFls. 31,000,000)	
1970	DFls. 33,000,000)	

Predominant source of finance: the central Government.

6/7. No participation in the training of teachers and educational researchers is undertaken.

8. Aims and fields: the collection, processing and publication of statistical data concerning the whole of society.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Matrix Wetenschappelijk Onderwijs* (University training matrix)

Number of research workers engaged in project: 5

Starting date: 1968

Purpose: Integration of matrix, quantitative data concerning students of university training.

Procedure: Questionnaires. Starting from uniform application forms for all students in university training in the Netherlands, data are derived for the determination of quantitative statistics (including students per discipline, institution, age group, social and regional origin), cohort statistics (application progress and study results of student generations) and matrix analyses (student flow in university training). The university training matrix will play a central role and serve as an integration frame for the quantitative data.

D.2 *Integrale lerarentelling (onderdeel van een volledige personeelstelling bij het gehele onderwijs)* (Complete census of teachers - part of a total enumeration of personnel in education)

Number of research workers engaged in project: 4

Starting date: 1969

Purpose: To establish the structure of the teaching profession according to certificate possession and certificate use.

Procedure: Questionnaires.

D.3 *Kosten onderwijs in nationale rekening* (Costs of education in national budgets)

Number of research workers engaged in project: 4

Starting date: 1970

Purpose: Investigation of an improved classification and more refined specification of costs of education in national budgets.

Procedure: Verbal consultation.

D.4 *Regionaal onderzoek voortgezet onderwijs 1969-70* (Regional investigation of secondary education, 1969-70)

Number of research workers engaged in project: 5

Starting date: 1969

Probable completion date: 1970

Purpose: Identification of regional differences in secondary school attendance for the purpose of educational planning.

Procedure: Secondary school secretaries are asked to supply the name of the home town of the pupils in attendance at the school. These data are processed for each type of school according to the school region, and to the residential community.

D.5 *Enquête: Universitair onderwijs en onderzoek 1969-70* (Questionnaire: University education and research, 1969-70)

Number of research workers engaged in project: 4

Starting date: 1969

Probable completion date: 1971

Purpose: Investigation of the composition of the scientific staff and the time spent on training, research and other university activities.

Procedure: By means of individual questionnaires, each professor and staff member is interviewed twice each year as to his activities in the past week. The administering of the questionnaire is organised in such a way that dispersion in time and faculties and institutions is as large as possible.

XXXI. *Name of organisation:* DIRECTORAAT-GENERAAL VOOR DE ARBEIDSVOORZIENING,
AFDELING BEROEPSKEUZE-VOORLICHTING,
BUREAU RESEARCH
(National Employment Service, Division for Vocational Guidance, Research Office)

Address: Dr Reyerstraat 12 B, Leidschendam

Directors:		
	F.H.A.M. Kruse,	Director for specialists employment policy
	Drs. P. Kal,	Head of the Division for Vocational Guidance
	Drs. J.S. Hische,	Head of the Research Office

A. HISTORICAL

1. Year of foundation of the Research Office: 1960.

2. Reason for foundation: the need for verification of the results from public information on vocational guidance.

3. The Office was established on the initiative of Drs. A.L.C. Knook, former head of the Division for Vocational Guidance.

B. STATUS AND PROGRAMME

1. The Research Office is a government organisation.

2. There is no board.

3. There are no divisions, sections, etc.

4. The staff consists of five persons who devote part of their time to research.

5. Budget: no information available.

6/7. Training of teachers and educational researchers: not applicable.

8. Aims and fields: The promotion of a reliable test instrument; research into the characteristics of groups involved in vocational guidance.

C. MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

Voorspelbaarheid van opleidingsresultaten aan de centra door vakopleiding voor volwassenen (Predictability of training results of the centres for adult vocational training)

Total amount of time spent on project: 1965-70

Purpose: To develop a method to establish those factors which determine the predictability of training results.

Procedure: Testing method with the accent on group tests of practical skills with statistical treatment.

Conclusions: Results primarily concern improvements with new, practice directed tests. These tests are based on the principle of functional replication. By this is meant the replication in test material of practical actions which on the one hand do not reach such a degree of concretisation that one could speak of job replications, and on the other hand avoid a reduction to elementary motorial actions. Functional replication creates possibilities for allowing factors like organisation of the work, concentration etc, which could hardly be introduced into factorially pure tests, to play a part in relevant proportions. Full attention is paid to the results of centres as verification criteria. In fact systematic differences in course results between centres were present on a large scale. Their cause could not be sought in population differences. Indications exist about specific orientation towards quality or speed, differences in qualitative marking criteria, and also more fundamental, didactic differences. When such "centre"-effects are eliminated, many of the results in the training can be predicted from test behaviour. As a complement to general level of intelligence, a general level of practical proficiency and specific abilities prove to be important. Also the influence of motivational factors can be demonstrated. Clear differences in the structure of interests exist between different trades, but are of minor importance to level of performance during the courses.

D. MAJOR RESEARCH PROJECT IN PROGRESS

Gecentraliseerd afsluitingsonderzoek LTS-abituriënten, Eindhoven
(Centralised final investigation on LTS-graduates with regard to their entrance into society) (LTS = technical school, lower level)

Starting date: 1969

Probable completion date: 1970

Purpose: To investigate the possibilities of guidance for LTS-graduates; to prevent repeated admission examination by schools and industry. The purpose is to facilitate entrance into society for the LTS-graduate and to help industry with its selection need.

Procedure: Test procedure; statistical methods; questionnaire.

The experiment was divided into a technical and an organising phase. Test and school results were compared with results in industrial training schools, technical schools at secondary level and jobs in industry. Both tests and school marks supplied valid predictive information with regard to the various kinds of follow-up results.

Based on tests and school marks a set of requirements which should promote optimal differentiation could be composed. Subsequently an organisation and experimental phase was tried out to make optimal use of test and school information for guidance in occupational planning.

The research project examined in particular individually oriented, independent vocational guidance, including selection elements. This means that a central "data bank" could provide information about a client to those organisations interested (school and otherwise). This part of the experiment is still in progress.

XXXII. *Name of organisation:* GEMEENTELIJK PEDOTHERAPEUTISCH INSTITUUT (Municipal Institute for Educational Therapy)

Address: Niasstraat 59, Amsterdam

Director: Dr. A.J. Wilmink

A. HISTORICAL

1. Year of foundation: 1948. Year of coming into operation: 1950.

2. After World War II there was a need for an institute that could make an experimental diagnostic and therapeutical contribution to handicapped child care. This need was felt by both the University of Amsterdam and the municipality. The Institute's activities are in particular directed at the less severe forms of mental and emotional handicaps.

3. The Institute was founded on the initiative of a number of professors at the University of Amsterdam and representatives of municipal institutions.

B. STATUS AND PROGRAMME

1. The Institute is a public organisation, affiliated to the University. The personnel costs are borne by the University and the municipality.

2. The Institute has no governing board.

3. The Institute has the following sub-divisions:

- administrative section
- orthopedagogical section
- psychological section

- medical section
- socio-psychiatrical section.

4. There are 34 persons employed in the Institute, of whom four are part-time researchers.

5. Budget

1968	DFls. 948,440
1969	DFls. 1,094,845
1970	DFls. 1,181,746

6. The Institute organises teacher training courses in primary education.

7. The training of researchers is furthered by project guidance.

8. Aim: Research is directed at the development of applied science and fieldwork. It is aimed at orthopedagogics in the field of special education.

Methods: Mainly sampling research and empirical methods.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Opvallende kleuters* (Maladjusted children in the pre-school)

Researchers: A. WILMINK, C. van RIJSWIJK

Starting date: 1969

Probable completion date: 1975

Purpose: Development of diagnostic and therapeutic methods for early diagnosis and treatment of divergent and maladjusted pre-school children. Objectives:

1. standardisation of an orthopedagogical research model;
2. quantitative and qualitative identification of the sub-group "maladjusted pre-school children" in the pre-school population as a follow-up to the publication "Maladjusted Children";
3. apart from the maladjusted pre-school child who needs extra care and attention in normal school situations, early discovery and placing in an appropriate centre of educationally sub-normal pre-school children;
4. identification of extra treatment to be applied within the regular pre-school education in view of a better functioning of the maladjusted child.

Procedure: A pedagogical diagnostic scale is standardised on children from 4-7 years of age. The normal, maladjusted and divergent pre-school children are followed into elementary education. Achievement and behaviour are compared with educational results. The treatment project is co-ordinated with this project. The research model differs from all existing models in that it is a purely pedagogical model and makes use of additional suggestions. The items of the model are derived from the pre-school activities and tools.

D.2 *Bijzondere afdeling voor zeer jeugdigen aan een pedologische instituutschool* (Special department for the very young in a pedological institute school)

Researchers: A.J. WILMINK, A. RUYGH, M. BROUWER-WILMERING,
O. SCHMALHAUSEN, M.E. SCHREUDER

Starting date: 1969

Probable completion date: 1972

Purpose: To obtain information on diagnostics and therapy in the special department for the very young.

Procedure: Description of organisation, methods, aids; inventory investigation.

A survey of casuistry in the period 1952-68 was quantitatively and qualitatively processed. The organisation of this experimental project was described. The objective and pre-conditions of such an organisation were critically considered. Multi-disciplinary diagnostics of the very young disturbed were described by each of the representatives from the team. Subsequently case descriptions, descriptions of the organisation of a department and pedotherapeutic forms of treatment will be issued.

D.3 *"De bedreigde ontwikkeling" een psychologische studie over Amsterdamse kinderen met leer- en opvoedingsmoeilijkheden* (Developmental study of children with learning and behaviour problems)

Researchers: T.J.C. BERK, F. SMITH, W. PAPE, H. JANSSEN

Starting date: January 1969

Probable completion date: June 1971

Purpose: The object of the project is to clarify the developmental problems of the population of *lom*-schools (school for children with learning and behaviour problems).

Procedure: Comparison of mean and longitudinal data from psychological research; descriptive and empirical methods.

A sample of 12 boys and 5 girls from a *lom*-school is followed during the complete duration of school attendance. The result of this will take the form of a casuistry. This is to be considered an explorative field study, involving two parts:

1. descriptions on the basis of psychological research comparing mean and longitudinal data (casuistic),
2. information obtained from behaviour-observation schools by means of personality tests and test batteries is worked out in cross-section research (quantitative).

Both parts deal amongst other things with the relation between nomothetical and ideographical methods.

XXXIII. *Name of organisation:* NIJMEEGS INSTITUUT VOOR ONDERWIJS RESEARCH (Nijmegen Institute for Educational Research)

Address: Adelbertuslaan 6, Nijmegen

Director: Dr. P.J. Hettema

A. HISTORICAL

1. Year of foundation: 1968.

2. Reasons for the foundation of the Institute:

- promotion of educational research on an interdisciplinary basis,
- promotion of educational research of a more systematic nature (programmed research),
- co-ordination of educational research in Nijmegen.

3. The Institute was founded on the initiative of the Faculty of Social Sciences of the University.

B. STATUS AND PROGRAMME

1. The Institute is affiliated to the University.

2. The Governing Board consists of nine members representing the University Board, the Sub-Faculty of Pedagogy, the Sub-Faculty of Psychology, the Sub-Faculty of Social and Cultural Sciences. The function of the Board is to supervise:

- research (priorities and reporting),

- personnel policy,
- financial administration.

3. The Institute has the following sub-divisions:

- project structure, management and staffing,
- research organisation and execution,
- administration.

4. The staff consists of eight part-time researchers.

5. Budget

1968	DFls. 130,000
1969	DFls. 280,000
1970	DFls. 300,000

Predominant source of finance in 1968: Catholic University of Nijmegen; 1969: Catholic University of Nijmegen and the Educational Research Foundation (both approximately 50%); 1970: see 1969.

6. The Institute does not participate in teacher training.

7. Training is organised for prospective educational researchers.

8. The programme has concentrated on the teaching/learning process. In the near future, a broadening of the activities is to be expected. A new programme is in preparation.

C. MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

Ontwikkelen van een selectiebatterij voor opleidingen tot docent expressievakken. Fase I (Development of a selection battery for the training of teachers of expressive subjects. Phase I)

Responsible researchers: P.J. HETTEMA, A.J. MENS, G.J. STEMERDINK

Number of research workers engaged in project: 5

Time spent on project: May - July 1970 (1st phase)

Purpose: Development of a selection battery, with which the general aptitude of candidates for training as teachers of expressive subjects can be determined.

Procedure: Standardised tests, taken in groups.

Conclusions: In the first phase the following tests were taken by about 300 candidates admitted to the expressive subjects section of the Katholieke Leergangen (a teacher training college):

(1) GATB, (2) PMT (achievement motivation test), (3) Kuder (profession preference test), (4) SIW (scale for interpersonal values).

In the following phases the extent to which the test results correlate with results of instruction, study satisfaction and progress of the students concerned will be investigated.

On the basis of data obtained in this way the test battery will be corrected and amplified.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Interaktie tussen instruktiestijlen en leerlingkarakteristieken met betrekking tot het lesrendement bij het HAVO* (Interaction between styles of instruction and pupil characteristics with regard to the instructional output in secondary general education, higher level. Phase I: styles of instruction)

Responsible researchers: P.J. HETTEMA, W.M.G. HOUX, G.J.G. WOOLTHUIS, G. STEMERDINK, A.E. DIESSEN

Number of research workers engaged in project: 17

Starting date: March 1968

Probable completion date: October 1971

Purpose: To find interactions between styles of instruction and pupil characteristics with regard to increasing the instructional output. Styles of instruction are defined as relatively durable, not restricted to the classroom, characteristic manners of instruction of the individual teacher.

Procedure: Data collection by means of video-recording and coding of material according to observation schemes developed by the team. Techniques of analysis: variance, factor and cluster analysis. The research design is constructed in such a way that stability and classroom restriction can be controlled. From 100 teachers of English and mathematics (50 per subject) in total 400 teaching recordings were obtained (2 lessons per teacher at different times and different forms in the second year of training). Subject matter was pre-selected in such a way that a minimum of pre-knowledge by the pupils was assumed, and that it could be fitted into the existing programme at any arbitrary point of time. The teacher was left free to decide in what way to treat the subject with the one restriction that no other teaching aid but the blackboard was to be used.

The recordings obtained were analysed according to coding systems geared to the following aspects: structural features of the lesson; linguistic usage; visual and social characteristics. Only the behaviour observable with a minimum of interpretation is included. Thus about 100 variables were acquired. Analysis of the recorded material (punch cards) with the aid of factor and cluster analysis remains to be done. Apart from the observation data, the judgment of the pupils on the manner of instruction of the teacher was also included. Pupils were presented with a list of 76 statements on teacher behaviour and were asked to choose from these the 30 most relevant ones. Reliability of all items obtained were checked. Cluster analysis produced seven interpretable clusters. The results will be analysed as to their relation to the other results. To this end a stepwise scheme of analysis is constructed.

D.2 *Een onderzoek naar de effectiviteit van bepaalde procedures om het instructiegedrag van leraren systematisch te veranderen* (Research into the effectiveness of certain procedures to change systematically the instructional behaviour of teachers)

Responsible researchers: A.J. MENS, W.M.G. HOUX, A.F.M. VERHOEVEN,
G.J. STEMERDINK, A.E. VERHOEVEN

Number of research workers engaged in project: 23

Starting date: May 1970

Probable completion date: November 1973

Purpose: To find effective and practically manageable procedures to change systematically and individually the instruction behaviour of teachers.

Procedure: Observation of audio-visually recorded instruction behaviour; assessment by pupils and teachers of instruction behaviour; training courses.

The investigation is carried out in five phases. In the first and last phase measurement of all subjects is carried out. Both pre- and post-tests involve two measurements. In the first phase this concerns examination of the extent of change of instruction behaviour towards the individually formulated goals of the training course (dependent variables). The second instrument of measurement involves a student judgment list to establish the instruction image of the teacher in the classroom. The teacher examines objectively his instruction behaviour through information on the class judgment in comparison with self-judgment and his evaluation of the assessment scores of the pupils. The teacher is confronted with his actual instruction behaviour with the aid of the video-tapes and observation scores. Alternative instruction behaviour patterns are presented by means of video-recordings. Desire for change and formulation of training course objectives are explained. Individualised short-term courses are organised.

One control group and three experimental groups participate in the project.
Total number of subjects: 100 teachers, 2nd and 3rd form secondary general education (higher level); teaching English, French, German, Dutch.

XXXIV. *Name of organisation:* STICHTING ONDERZOEK LEERMOEILIJKHEDEN (SOL)
(Foundation Research Institute for Learning Difficulties)

Address: Trans 14, Utrecht

Director: Professor Dr. W.E. Vliegenthart

A. HISTORICAL

1. Year of foundation: about 1965.

2. The need for possibilities to obtain subvention from external sources and to have research projects carried out also by researchers not affiliated to the University led to the foundation of the Institute.

3. The Institute was founded on the initiative of Professor Dr. W.E. Vliegenthart, the Governing Board of the University of Utrecht and the education authority of the municipality of Utrecht.

B. STATUS AND PROGRAMME

1. The Institute is affiliated to the University of Utrecht.

2. The Governing Board consists of three members, representing the University, the municipality of Utrecht and the Pedagogical Institute of the State University of Utrecht.

3. There are no sub-divisions in the Institute.

4. The Institute employs 37 persons, eight of whom are engaged full-time in educational research.

5. Budget

1968	DFls.	106,730	) Office and housing costs
1969	DFls.	362,854	) are not included
1970	DFls.	349,178	)

Predominant source of finance: the Educational Research Foundation.

6. No teacher training is undertaken.

7. Students participate, under supervision, in the projects.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Schoolbegeleiding aanvankelijk lezen* (Investigation into reading prerequisites)

Responsible researchers: J. SIXMA, E.H. KEUKEN

Number of research workers engaged in project: 9

Starting date: March 1969

Probable completion date: September 1971

Purpose: Development of a test predicting which children will have difficulty in learning to read; development of a programme that concurs with the test results.

Procedure: Various statistical methods for test development; inquiries; interviews; various tests for reading progress.

In the project teachers of the first forms of the "Staatsschool" (State school) employ a reading-prerequisite test indicating which children are insufficiently "pre-worded" to be able to follow successfully the process of learning to read. Closely linked to this test a programme is developed to involve in an appropriate manner these "poorer" pupils in group reading instruction. The test and the programme are made available to the schools through local and regional development and teacher centres. In the context of the investigation close attention is given to the development of guidance strategies.

D.2 *Onderzoek naar de problemen welke zich voordoen bij het invoeren van een bepaald differentiatiemodel in het basisonderwijs* (Research into the problems involved in the introduction of a differentiation model in primary education)

Number of research workers engaged in project: 11

Purpose: To give a description and analysis of the introduction problems the teachers are faced with when implementing a differentiation model in primary education.

Procedure: Systematic observation; interview; inquiry; guidance discussions; guidance meeting.

The investigation aims at a systematic collection of empirical data concerning the conditions by which a differentiation model, characterised by level differentiation, group introduction, assimilation of tasks in groups and a follow-up discussion, can be implemented in the primary school (in this case limited to the second grade and to reading only).

D.3 *Project Compensatie programma* (Project-compensatory programme)

Responsible researchers: G.A. KOHNSTAMM, J.C.C. RUPP, J.M.F. TEUNISSEN, B. Heine-v.d. VLIET

Number of research workers engaged in project: approximately 32

Starting date: 1968

Probable completion date: 1973

Purpose: Development and testing of a compensatory programme for socially disadvantaged children from 5-6 years of age.

Procedure: Tests; observation models; questionnaires; pre- and post-test design with longitudinal control and comparison group.

The project consists of three phases: (1) preparation (1 year); (2) development (2 years); (3) evaluation (2 years). In the developmental phase three different strategies are constructed, respectively Language and Thought Programme, School Readiness Programme and Family Preparation Model. After two years of development the various strategies are integrated in one approach for both school (nursery) and family.

XXXV. *Name of organisation:* WERKGROEP EMPIRISCHE INLEIDING
(Working Group Empirical Introduction)

Address: Beulingstraat 27 III, Amsterdam

Director: Dr. J. de Miranda

A. HISTORICAL

1. Year of foundation: 1963.

2. Reason for foundation: dissatisfaction with the practice of science teaching in schools for secondary education. Supposition: didactics do not function as a scientific discipline.

3. The Working Group was established on the initiative of Dr. J. Roest and Dr. J. de Miranda.

B. STATUS AND PROGRAMME

1. The Working Group is composed of secondary education teachers.

There are links with the Educational Research Centre of the Catholic University of Tilburg, secondary schools, the Educational Research Foundation, the Technological University Twente (teacher training department), the Government Committee for the Modernisation of the Chemistry Curriculum, the "Algemeen Pedagogisch Centrum" (Pedagogical Centre) and the State University of Utrecht.

2. The organisation has a directing board consisting of two persons. Its functions are: co-ordination, advice and administration.

3. There are no divisions, sections, etc.

4. There are 17 persons working with the organisation.

5. Sources of finance: subventions from:

- Algemeen Pedagogisch Centrum,
- SVO (Educational Research Foundation)
- Ministry of Education and Sciences.

6. Participation in the training of teachers:

- in-service training of those teachers participating in the Working Group,
- publications, and
- through specific activities of the members.

7. No participation in the training of educational researchers is undertaken.

8. Aims and fields:

- the development of a course for science instruction,
- exchange of teaching experience with the course designed,
- modification of the course on the basis of teaching results.

D. MAJOR RESEARCH PROJECT IN PROGRESS

Onderzoek naar het ontwerpen, gebruiken, toetsen en omwerken van een empirische inleiding in de scheikunde voor het vwo (Investigation of the design, use, testing and adaptation of an empirical introduction to chemistry for pre-university education)

Responsible researchers: H.H. ten VOORDE

Number of research workers engaged in project: 3

Starting date: August 1968

Probable completion date: September 1972

Purpose: To study by feed-back of the experience obtained with the instruction programme designed, whether (a) improvement of instruction can be achieved, and (b) didactics can function as an empirically and practically manageable science.

Procedure: (a) recordings of discussions between pupils and between pupils and teachers; (b) study of these recordings with regard to the teaching/learning process of both teachers and pupils; (c) development of a method for analysing such recordings.

Through interaction of the "praxis of teaching" and the "formation of didactical theory" an examplary contribution is made to scientific didactics.

XXXVI. *Name of organisation:* PEDAGOGISCH CENTRUM DER GEMEENTE ENSCHEDE (Pedagogical Centre of the Municipality of Enschede)

Address: Oldenzaalsestraat 123 A, Enschede

Director: Drs. F.H. van der Veen

A. HISTORICAL

1. Year of foundation: 1954. Establishment of pedagogico-didactical guidance: 1962.

2. The need in the schools for assistance by experts led to the foundation of the organisation.

3. The Centre was founded on the initiative of the local authorities of Enschede.

B. STATUS AND PROGRAMME

1. The Centre is an indèpendent organisation subsidised by the local authorities of Enschede.

2. The Board consists of eight members representing the schools in Enschede.

3. The organisation has the following divisions:

- investigation into (a) classroom practice at the pre-primary and primary levels; (b) guidance at the pre-primary, primary and transitional year levels;

- research into individualised examination and guidance in special education schools;
- administration.

4. Number of personnel: unknown.

5. Budget

1968	DFls.	1,137,370)	40% of the budget is used for educational research
1969	DFls.	1,324,140)	
1970	DFls.	1,443,090)	

Predominant source of finance: the municipality of Enschede.

6. Participation in the training of teachers is by means of courses.

7. Training programmes for educational researchers are organised.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Begeleiding en onderzoek in het 2e leerjaar basisonderwijs* (Guidance and research in the second year of primary education)

Researchers: O.E. de WIT, J.J. WIWEL, T.W. de WILDE, J.G.J. BEKHUIS

Starting date: 1964-65

Probable completion date: 1971-72

Purpose: (1) to assess the effects of the innovation of reading instruction in the 1st form; (2) exploration of the educational situation in the 2nd form; (3) extension of guidance from the 1st to the 2nd form.

Procedure: (1) periodical measurements of reading, writing and arithmetic achievements by testing; reporting followed by special assistance for groups and individual pupils; (2) classroom observation, questionnaires for teachers, sociometric scales; (3) transfer by means of direct reporting as well as reporting in working groups (horizontal transfer is still in the developmental stage).

Various tests were constructed: reading cards, reading comprehension tests, cipher tests, verbal arithmetic tests, writing tests. Results were of direct importance to the schools and therefore immediately fed back to them. Attention is given to the improvement of instruction to total forms and to problems of co-ordination in consecutive years.

D.2 *Vernieuwing van het leesonderwijs in de 1e klas van het basisonderwijs* (Innovation of the reading instruction in the 1st form of primary school)

Researchers: C. v. CALCAR, O.E. de WIT, J.J. WIWEL, K.C.R. HESSELINK, T.W. de WILDE, J.G.J. BEKHUIS

Starting date: 1962-63

Probable completion date: 1971-72

Purpose: Improvement of reading achievement.

Procedure: Course on didactics and methodology of reading; periodical measurements of reading achievements with the aid of tests, followed up by assistance to individual pupils and groups of pupils.

D.3 *Activeringsprogramma* (Activation programme)

Responsible researchers: C. van CALCAR, O.E. de WIT, T.W. de WILDE

Starting date: 1966-67

Probable completion date: Unknown

Purpose: Elimination of disadvantages in working class children.

Procedure: Educational programmes combined with environmental influencing.

Special educational programmes have been developed to compensate for the known disadvantages experienced by working class children. Up till now programmes were effectuated in the first year of primary education. At the beginning two remarkable results were achieved: (1) an IQ rise of an average of eight points within two months; (2) a considerable improvement in the learning achievement.

Afterwards the gains resulting from the first years of the investigation appeared to have disappeared. The gains achieved were not only lost in the first generation investigation, but also in the subsequent generations. The initial success of 1966-67 became less and less. Analysis rendered sufficient information to redesign the investigation in a new direction. Causes of the diminishing success are contributed to: (1) insufficient continuity in the instruction programmes; (2) too large dependency on experts in the implementation of new programmes; (3) little objectivation of new educational initiatives; (4) inadequacy of the environment-influencing programme.

XXXVII. *Name of organisation:*	STICHTING RESEARCH AANGAANDE KINDEREN MET LEER- EN OPVOEDINGSMOEILIJKHEDEN (Foundation for Research on Children with Learning and Educational Difficulties)
Address:	Parklaan 15, Groningen
Director:	Professor Drs. Wilhelmina J. Bladergroen

A. HISTORICAL

1. Year of foundation: 1962.

2. Reasons for the establishment of the Foundation: (a) the need for thorough investigation of the nature and origin of learning difficulties in school children; (b) the prevention and remedy of these difficulties; (c) the impossibility to obtain resources for such research from the government etc called for the establishment of a private foundation to finance activities in this field.

3. The initiative for foundation was taken by a group of industrialists under the leadership of Mr E. ten Cate and Mr B.D. Breuning ten Cate.

B. STATUS AND PROGRAMME

1. The Foundation is a private scientific institute. There exists a relationship with the State University of Groningen in the persons of Professor W.J. Bladergroen and other colleagues.

2. The Governing Board consists of 10 members, two of whom are managing directors. The scientific advisory committee consists of four persons. The Board represents the Foundation and is responsible for the appointment of personnel and determination of salaries. It furthermore approves the budget and compiles the annual reports. Finally, it can change the statutes and dissolve the Foundation. Science, industry and commerce are represented on the Board.

3. The Foundation is sub-divided into:

- a test bureau,
- a treatment section,
- a research section.

4. The staff consists of eight researchers, of whom three are full-time.

5. Budget

1968	approximately	DFls.	200,000
1969	"	DFls.	200,000
1970	"	DFls.	200,000

Sources of finance: (a) subventions (Educational Research Foundation, Bernard van Leer Foundation); (b) assignments (municipality, industry); (c) grants (individuals and industry).

6/7. The Foundation does not participate in the training of teachers and educational researchers.

8. Aims: (a) research into developmental deficiencies and learning difficulties, their origin and impact on school achievement and education; (b) research into and application of methods and materials for the treatment of these difficulties; (c) instruction, coaching and guidance in this treatment.

Methods: psychological tests (individual and in groups); observation; courses; lectures; evaluation and systematic data processing; publications.

C. MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

C.1 *Veldwerk Onderwijsresearch LTS Twente* (Field research - technical school, lower level, Twente)

Time spent on project: January - December 1967

Purpose: (1) to determine the frequency of learning disabilities in pupils at technical schools, lower level; (2) to trace the possible negative influence of these disabilities on school success.

Procedure: (1) group examination of all pupils in the first forms of technical schools in Almelo, Hengelo and Enschede; (2) individual examination of the pupils selected on the basis of the group examination and the teachers' opinions.

Conclusions: An extensive examination of children from a great number of primary schools in the three largest towns of Twente (Almelo, Hengelo and Enschede) and the community Smallingerland revealed that about one-third suffered to some extent from learning disabilities. Within this group one-third of the children were afflicted with disorders to such an extent that other forms of school education had to be advised.

Experience showed that these disorders, which negatively influence the IQ, can often be reduced or even totally removed by adequate treatment.

As, however, the IQ is often the basic factor on which advice is given and is decisive for continued school education, it is likely that a great number of children with disorders, that respond to treatment, are relegated to a type of school which is below their mental capacities. A great number of children seem to go to technical schools simply as the result of having been assessed as having a middle or low IQ and not for reasons of technical ability or talent.

This trend gave sufficient reason for expanding the research to the first forms of all technical schools in the towns of Almelo, Hengelo and Enschede, in order to find out whether in these classes also a great number of children were suffering from the same disorders and in what way these difficulties had their effect on the results in school.

C.2 *Vooronderzoek oprichting en begeleiding LOM-school in de gemeente Winterswijk* (Preliminary investigation of the foundation and guidance of a LOM-school in the municipality of Winterswijk) (LOM-school = school for children with learning and behaviour difficulties)

Time spent on project: October 1967 - October 1970

Purpose: To study the primary school population in order to determine the need for the establishment of a LOM-school in Winterswijk.

Procedure: Individual psychological examination of children selected by headmasters and school-physicians; participation in the admission board; advice on the foundation and equipment of the LOM-school; guidance and supervision during the period of purchasing.

Conclusions: The psychological test of a 9-year-old boy resulted in a close contact between the Research Foundation and the school. This school, though being a normal primary school, had the special task of taking, as far as possible, children with learning difficulties from all other schools in the same community. This situation was based on the special dedication of the headmaster and the staff and the possibilities within this school for a more individual treatment of the children. From the contacts with this school, city council meetings etc, the question arose whether a special school for children with learning difficulties should be founded. In the course of 1968 a large number of children from various schools at Winterswijk, selected by the headmasters as well as by the school medical officer, were tested. Many children were considered possible candidates for the new school. The decision to build such a school was taken in 1969. The school started in September 1969 in temporary accommodation with about 50 children. This number grew steadily to a total of 100 children in the course of the 1969-70 school-year.

The idea of a regional school advisory and supervision service originated from the co-operation between the Research Foundation and the municipal authorities. This service was begun in September 1970.

C.3 *Gebruik van bouw- en constructiedozen in het onderwijs* (The use of building and construction kits in school education)

Time spent on project: January 1969 - December 1970

Purpose: (1) to check to what extent certain building kits are suitable for children of various ages; (2) to check to what extent certain construction kits are suitable for use in teaching physics and mechanics starting in the highest form of primary schools.

Procedure: (1) the children play freely or after example, with or without guidance, with or without assistance and/or instruction;
(2) they are encouraged to seek and find certain physical and mechanical principles, with or without assistance and/or instruction.
In all these cases observation and systematic assessment, evaluation, elaboration, reporting are carried out.

Conclusions: In the middle of 1968 the Foundation was invited to give an opinion on certain kinds of commercially designed building and construction kits with plastic and metal parts. A small research team thoroughly investigated all aspects of the materials, eg forms, sizes, colours, attractiveness and appeal, both as a toy and/or as a learning aid for children of various ages.

A two-year contract was concluded between the manufacturers and the Foundation. Sufficient finance was made available for two purpose built rooms. Research started in April 1969 and was based mainly on observation of small groups of children (aged from 6 to 11 years) who were invited to play with plastic articles of various shapes, sizes and colours. Notes were made as to which specific parts preference was given, which kinds of models built, etc.

Children were allowed to play and build freely, or from illustrations in a model book, either with or without instruction and guidance. A large number of models were tested for their suitability for children of certain ages. A scale of suitability was arrived at and a completely new book of models was designed. This part of the research ended about April 1970.

Research is still going on with regard to the use of another type of mechanical and electrical construction (engineering) kit in teaching some physical and mechanical principles to children starting from the age of 11 years.

C.4 *Onderzoek naar de samenhang tussen stoornissen in de ontwikkeling van het binoculaire zien en het optreden van leermoeilijkheden en gedragsafwijkingen bij kinderen, speciaal in het Lager Onderwijs*
(Research into the relation between disorders in the development of binocular sight and the existence of learning difficulties and behavioural disorders in children, especially in primary schools)

Time spent on project: Started in July 1964 (not terminated because of lack of funds)

Purpose: To indicate the relation mentioned above and the possibility of treatment of retardation by training with special spectacles and exercises.

Procedure: Psychological and ophthalmological examination of children who received treatment under the project and of those who did not; systematic evaluation of data and compilation of report.

Conclusions: The opinion that there is a link between some forms of learning difficulties (eg in reading and calculating) and retarded development of binocular sight in schoolchildren originated from long years of experience. Partly subsidised by the Ministry of Health and Social Affairs, research was carried out on a great number of children with learning difficulties who also suffered from lack of development in perception. A definitive conclusion on the causality of these two phenomena could not be drawn at that stage.

In order to reach final conclusions a programme was set up for the comparative examination of a large number of children from normal primary schools together with the data received from previous research on children with difficulties in learning and perception. A small team of psychologists and doctors was instructed and trained for this purpose and the necessary instruments were made available.

However, because of lack of finance this programme could not be realised. Despite various requests to a number of institutions which might have been able to furnish the necessary funds for the research, no financial support for the completion of this project could be obtained.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Onderzoeken en ontwikkelen van speel-leermaterialen* (Testing and development of learning materials and educational toys)

Researcher: W.J. BLADERGROEN

Starting date: July 1969

Purpose: Testing and evaluation of learning materials and educational toys that are or will be put on the market; the development and testing of new materials.

Procedure: Assessment and observation of children with the material; measurement of results of treatment with these materials; the drawing up of instructions.

D.2 *Research en actie programma tbv leerlingen van 2 lagere en 2 kleuterscholen in Stadskanaal/Musselkanaal* (Research and action programme for pupils of two primary and two pre-primary schools in Stadskanaal/Musselkanaal)

Researcher: W.J. BLADERGROEN

Starting date: April 1968

Probable completion date: December 1971

Purpose: To arrive at more appropriate forms of education for these children, the majority of whom suffer from retardation and developmental disorders caused by their social environment and origin.

Procedure: Training concerning developmental disorders and their origin on which methods of treatment and schemes are based; restructuring of the instruction in these schools; introduction of methodologies and materials; instructing and coaching of teachers.

All pupils (with the exception of the highest forms) were tested and a diagnosis was formed on their specific difficulties and disorders. On the basis of this diagnosis a programme for special treatment/learning methods has been designed. The programme is carried out during the 1970-71 school year with the assistance of trained staff from the Foundation. Special materials are introduced and special methods are taught to the regular teachers in the schools. This coaching and instructing of the staff by members of the Foundation will last till September 1971 in order to establish a programme for the treatment of these children by their own teachers in the year to come. The results of this programme will be evaluated by testing the children again at the end of this period.

XXXVIII. *Name of organisation:* CHRISTELIJK PEDAGOGISCH STUDIECENTRUM (Protestant Pedagogical Study Centre)

Address: PO Box 30, Hoevelaken

Director: Dr. H.G. van den Doel

D. MAJOR RESEARCH PROJECT IN PROGRESS

Nijverdal experiment

Researchers: Tj. MEYER, W. MEIJER

Starting date: August 1968

Probable completion date: 1972

Purpose: Comparison of the results of two introductory methods in training French.

Procedure: Audio-visual; audio-bilingual; written and oral tests.

Starting from identical subject matter consisting of French dialogues recorded on tapes by native speakers two forms are taught with the aid of a laboratory and two different methods: (a) audio-visual method: the meaning of sentences is clarified by means of pictures and the usual direct procedures (pointing, mimicry, gestures, familiar French words); (b) audio-bilingual method: the meaning of sentences is clarified by means of translations given in Dutch.

The four aspects of usage (listening, speaking, reading, writing) are compared. An attempt is made to relate these to theories of learning psychology.

XXXIX. *Name of organisation:* STICHTING WERKGROEP STUDENTEN ONDERZOEK (Foundation Working Group, Student Research)

Address: Cornelis Bloemaertsingel 65, Rotterdam 14

Directors:
E.J. Kimman, Chairman
H.A. Blom, Secretary
R. Ravestijn, Treasurer

A. HISTORICAL

1. The Foundation, which is a student body, was established in 1969.

2. The Working Group was established within the scope of the fifth anniversary celebration of the Rotterdam Students Corps.

3. The organisation was founded on the initiative of E.J.M. Kimman, G.E.B. Verberg, J.A. Schmidt (students of the College of Economics, university level, Rotterdam).

B. STATUS AND PROGRAMME

1. The Foundation is an independent students' organisation.

2. The Board consists of six members and has the following functions:

- defining of problems,
- preparation,
- completion,
- financial administration

of the projects to be carried out.

3. No divisions, sections, etc, exist in the organisation.

4. Staff: no information available.

5. Budget

1969	DFls. 78,400
1970	DFls. 81,600

Predominant source of finance: Subvention from the Educational Research Foundation; contributions from AKZO, Philips, Shell and Unilever.

D. MAJOR RESEARCH PROJECT IN PROGRESS

Studentenattitude-onderzoek 1970 (Students' attitudes 1970)

Responsible researchers: E.J.M. KIMMAN, H.A. BLOM, P. RAVESTIJN,
J.A. SCHMIDT, P.A. TEERLING, A.P. VISSER

Number of research workers engaged in project: 7

Starting date: Preliminary investigation - April 1969
Investigation - December 1969

Probable completion date: Spring 1971

Purpose: To gain an insight into the attitudes of Dutch students concerning their studies, society and the university.

Procedure: Attitude investigation; sample investigation with the aid of scale constructions. A representative sample was taken from the Dutch student population.

The project is divided into three phases: (1) preliminary investigation: (sample n=101) this phase was terminated following a study-day held on 26 September 1969; (2) the investigation itself: (sample n=1006) fieldwork was carried out in the spring of 1970. Results are at present being analysed; (3) longitudinal research phase: an attempt will be made to interview the same students that participate in the project again during 1972, 1974 and 1976 in order to measure any changes in attitudes.

XL. *Name of organisation:* LANDELIJKE STICHTING LEVENSSCHOLEN VOOR WERKENDE JONGEREN
(National Foundation of Schools for Young Workers)

Address: Biltstraat 190, Utrecht

Directors: W.J. Pennings, General Director
Drs. H.J. Brand, Scientific Manager, Deputy Director
A.G. van Hout, Deputy Director
J.J. Koopman, Deputy Director

A. HISTORICAL

1. Year of foundation: 1954.

2. Reason for foundation: In many towns in the Netherlands schools

for young workers were established on the initiative of private persons. The need for support on a national level of these schools, pedagogically as well as with regard to general policy, led to the foundation of the organisation.

3. The organisation was founded especially on the initiative of the former Katholieke Arbeiders Jeugd, now called Katholieke Werkende Jongeren (Union of Catholic Young Workers).

B. STATUS AND PROGRAMME

1. The Foundation is an independent organisation active in the field of school guidance.

2. The Board consists of 18 persons representing young workers, employers' organisations, organisations of employees, local schools. Functions of the Board: decision-making and authorising.

3. The organisation has the following divisions:

- Management,
- Scientific division,
- Pedagogics,
- Organisation and finances.

4. 15 persons are working with the organisation, two of whom perform part-time research.

5. The Foundation is subsidised by the central Government.

6. Training and refresher courses for teachers of recurrent education are organised.

D. MAJOR RESEARCH PROJECT IN PROGRESS

Emperiment samenwerking part-time beroepsonderwijs en vormingswerk leerplichtvrije jeugd (Experiment in co-operation between part-time vocational training and out-of-school education for youth exempt from compulsory education)

Responsible researcher: H. BRAND

Starting date: September 1969

Probable completion date: July 1971 or 1972

Purpose: Examination of the effects of school education on students of part-time vocational training. The following aspects are examined: (a) how students and teachers experience participation in out-of-school training; (b) what effects it has on the participants; (c) what problems arise with the integration of out-of-school education and vocational training.

Procedure: Attitude tests; student questionnaires; questionnaires to vocational training teachers; team discussions; and planning evaluation by out-of-school education teachers.

300 students attending a vocational training course within the context of the apprenticeship training are at the same time offered an opportunity to attend an educational institute one half-day per week. It is anticipated that this should lead to the establishment of institutes for education and training on a national basis in which vocational training and out-of-school education will be integrated.

I. EDUCATIONAL RESEARCH POLICY

A. Agencies which promote educational research

The principal organisation at the national level for promoting educational research is the Planning, Research and Co-ordination Office of the Ministry of Education. The former Research and Evaluation Bureau of the National Board of Education of the Ministry of Education merged with the Planning, Research and Co-ordination Office on 31 March 1970. Generally, educational research projects at the national level, and all educational research activities of the Ministry of Education, are organised and co-ordinated by this Office.

Educational research is stimulated by contracts from both the State Planning Organisation and the Scientific and Technical Research Council of Turkey.

The Planning, Research and Co-ordination Office of the Ministry of Education conducts training programmes for educational researchers in co-operation with higher educational institutions, and it helps universities and other organisations undertaking educational research, especially in the field of data processing.

Planning and co-ordinating educational research

The planning and the co-ordination of research projects for the Ministry of Education are also responsibilities of the Planning, Research and Co-ordination Office.

Outside the Ministry of Education, educational research projects are planned and co-ordinated by the State Planning Organisation, by the Scientific and Technical Research Council of Turkey, and by universities.

Finance

The educational research projects of the Ministry of Education are financed by funds from the Ministerial budget. The State Planning Organisation, the Scientific and Technical Research Council of Turkey and the universities finance their own educational research projects. Sometimes, through special educational projects, aid is supplied from foreign sources.

Details of global national expenditure on educational research are not available but the total budget figures for the research activities of the Ministry of Education are given below:

ear	Turkish Lira
1969	2,192,125
1970	2,829,000

B. Priority fields

The priority fields of educational research are:

- curriculum development and evaluation,
- guidance in schools,
- the economics of education,
- preparation for the Third National Development Plan in Education,
- youth problems,
- the establishment of an educational data bank.

Priority in educational research problems is discussed in meetings of the National Board of Education, in meetings of the General Directors of the Ministry of Education and in the National Educational Convention. Priority in educational research projects is established by the State Planning Organisation, by the Research, Planning and Co-ordination Office and by the National Board of Education.

Special measures to promote research in these fields

The Government of Turkey has entered into a contract with USAID to help train researchers for the Planning, Research and Co-ordination Office, to help the Office to develop an educational data bank and to help the Office plan its programme and organisation.

Plans are under way for developing computer data systems. Turkish staff members are in training abroad, and a programme of on-going research has been projected.

C. Information

In general, the flow of educational research information is very constricted, mainly because the source of supply of such information is, at present, extremely limited. Research studies occasionally appear in the few journals published in Turkey.

No register has been established as yet.

Reports of in-office research, however, are distributed to relevant General Directors of the Ministry of Education and to the State Planning Organisation for use in decision-making.

Research findings are not at present usually disseminated to classroom teachers.

D. New trends

The development of a strong Planning, Research and Co-ordination Office with adequate educational data bank facilities is expected significantly to increase the educational research information.

II. ACTIVITIES OF EDUCATIONAL RESEARCH ORGANISATIONS

Replies were received from the following organisations:

I. The Ministry of Education Planning, Research and Co-ordination Office

II. The Department of Education, Middle East Technical University, Faculty of Arts and Sciences

III. The Department of Education, Institute of Social Sciences, Faculty of Social Administrative Sciences, Hacettepe University

IV. The Ministry of Education, Under-secretariat of Vocational and Technical Education, Study and Programming Office

V. The State Planning Organisation

VI. The Scientific and Technical Research Council of Turkey

I. *Name of organisation:* MİLLÎ EĞİTİM BAKANLIĞI, PLANLAMA-ARAŞTIRMA ve KOORDİNASYON DAİRESİ (Ministry of Education Planning, Research and Co-ordination Office)

Address: Teknik Okullar, Bahçelievler, Ankara

Director: Nusret Karcıoğlu

A. HISTORICAL

1. Year of foundation: On 13 October 1964 the Budget and Planning Office was established. On 24 June 1968 it became the Planning and Research Office and then on 31 March 1970, the Planning, Research and Co-ordination Office.

2. Turkey adopted national and economic planning in 1960. The State Planning Organisation requires each Ministry to develop a planning and research office to work with the State Planning Organisation in the preparation of 5-year national development plans.

3. The Planning, Research and Co-ordination Office was founded by the Ministry of Education at the request of the State Planning Organisation.

B. STATUS AND PROGRAMME

1. The Planning, Research and Co-ordination Office is a part of the Ministry of Education.

2. The Office has an advisory board at present made up of three under-secretaries, three assistant under-secretaries, twenty-seven directors, the chief accountant of the Ministry of Education, and the director of the Planning, Research and Co-ordination Office.

3. The Office is sub-divided as follows:

- Administration and Co-ordination Section,
- Planning Section,
- Research Section,
- Data Processing Section,
- Programme and Budget Development Section,
- Measurement and Evaluation Section,
- Guidance and Psychological Counselling Section,
- Statistical Section,
- Publication and Graphic Section,
- Nutrition Section (School Lunch Programmes),
- Training Section and the Fifth Evening Trade School.

4. Staff in 1970

	Full-time	Part-time
Total professional staff	99	-
Total researchers	12	-

5. Total budget

1968	835,000 TL.)	current expenses, not including investments
1969	1,779,350 TL.)	
1970	1,651,625 TL.)	

The predominant source of finance is the national budget.

6. The Planning, Research and Co-ordination Office does not participate in the training of teachers.

7. The USAID - Michigan State University project bears major responsibility for the training of research staff at the present time. Some staff members receive additional training from local universities on a part-time basis.

8. The major aims are to provide operations research findings, results of systems analyses, and evaluations of future trends by use of projective models, to assist Ministry of Education decision-makers in

formulating and implementing long-range educational development plans. For these purposes, a tape-library data bank and electronic data processing facilities will be developed.

C. MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

C.1 *Türkiyede Resmî İlk ve Orta Dereceli Okullarda Başarısızlık Yüzdeleri - 1968-69 Öğretim Yılı* (Percentage of failures in the public elementary and secondary schools in Turkey - 1968-69 academic year)

Responsible researcher: İ. ÖZGENTAŞ

Number of research workers engaged in project: 5

Time spent on project: Approximately 3 months

Purpose: To find out the percentage of failing students at different grade levels, by sex, in the 1968-69 academic year.

Procedure: In order to collect data, forms were prepared and given to the departments of the Ministry of Education. Numbers of students and failures were entered on the forms from the files of the departments by their own responsible personnel. Failure rates were calculated and checked at the Planning, Research and Co-ordination Office. The failing students in the middle schools (junior high schools) and the academic lycées were studied from 1962-63 to 1968-69 (ie seven academic years).

Conclusions: By type of school the percentages of failing students in the 1968-69 school year are summarised below:

		Failures (%)	
Type of School	Boys	Girls	Total
Elementary Schools	23.1	24.2	23.6
Middle Schools	29.6	24.8	28.4
Academic Lycées	36.1	32.2	35.0
Commercial Lycées (Second Cycle)	26.7	21.3	25.8
Normal Schools (First Cycle)	10.0	13.1	11.0
Normal Schools (Second Cycle)	16.7	19.2	17.9
Trade Schools (Second Cycle)	17.9	14.1	17.9
Girls' Institutes (First Cycle)	-	30.3	30.3
Girls' Institutes (Second Cycle)	-	4.0	4.0

	Failures (%)		
Type of School (cont)	Boys	Girls	Total
Independent Middle Trade Schools for Girls	-	22.8	22.8
Religious Schools (First Cycle)	27.2	20.5	27.1
Religious Schools (Second Cycle)	11.8	-	11.8

Bibliographical reference:

Özgentas, İ. *Türkiye'de Resmî İlk ve Orta Dereceli Okullarda Başarısızlık Yüzdeleri (1968-69 Öğretim Yılı)*, Ankara, Millî Eğitim Bakanlığı Planlama-Araştırma ve Koordinasyon Dairesi, 1970.

C.2 *Orta Dereceli Okul Öğretmenlerinin Tayin ve Nakil İşlemleri Araştırması* (Research into the appointment and transfer of teachers at secondary education levels)

Responsible researcher: İ. ÖZGENTAŞ

Number of research workers engaged in project: 6

Time spent on project: 7 months

Purpose: To obtain opinions of secondary school teachers on appointment and transfer procedures and to provide the relevant General Directorates of the Ministry of Education with the results of the research.

Procedure: A self-coded 15-item questionnaire was sent in March 1970 to all secondary school teachers in Turkey. 21,832 usable questionnaires were returned and were recorded in distribution tables by the State Institute of Statistics. Percentages were calculated at the Planning, Research and Co-ordination Office. Sex, marital status, seniority in the teaching profession, etc, were taken into consideration in the classification of the opinions of secondary school teachers.

Bibliographical reference:

Özgentaş, İ. *Orta Dereceli Okul Öğretmenlerinin Tayin ve Nakil İşlemleri Anketinin Sonuçları*, Ankara, Millî Eğitim Bakanlığı Planlama-Araştırma ve Koordinasyon Dairesi, 1970.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Türkiye'de Eğitimde Fırsat Eşitliği* (Equality of the educational opportunity in Turkey)

Responsible researcher: N. FİDAN

Number of research workers engaged in project: 3

Starting date: July 1970

Probable completion date: July 1971

Purpose: The study attempts to seek answers to the following questions: (a) What are the differences or inequalities in the availability of school opportunities at primary and secondary levels among the regions and provinces of Turkey? (b) What are the differences in the growth of school opportunities between the years 1960 and 1969 among regions, and what factors account for those differences? (c) What are the regional differences in the socio-economic backgrounds of students who had access to post-primary schools?

Procedure: The geographical regions of Turkey and each province will be considered as units for observation and analysis. Required data for this study will be gathered from government documents, and a sample survey will be conducted throughout the country. To indicate the differences in school availability and to analyse those differences within the context of economic and social development as well as in terms of the nature of the educational needs in each region and province, the following methods and measures will be employed: (a) The provinces will be grouped according to their demographic, economic and social characteristics. For this purpose, the cluster analysis method will be employed. (b) In order to deal with only a few variables, composite indexes of school availability, educational need, and educational growth will be constructed. (c) In order to explain the differences in growth of school opportunities, the technique of multiple regression analysis will be applied to the data.

D.2 *Bakanlık Müfettişlerinin Türk Eğitimindeki Rolleri* (The role of the supervisor in the Turkish secondary school)

Responsible researcher: G. KARAGÖZOĞLU

Number of research workers engaged in project: 5

Starting date: January 1970

Probable completion date: July 1971

Purpose: The study will focus on three main objectives related to the role of supervisors in secondary schools. (a) Identification of the role perception of supervisors in helping the teachers to improve the teaching-learning situation in the schools. (b) Determination of the differences between the supervisor's perception of his own role and the perceptions which teachers hold of his role. (c) Identification of the types of assistance which supervisors provide for improving the teaching-learning situation.

Procedure: There are 130 Ministry supervisors and about 40,000 teachers working in the secondary level educational institutions of Turkey. The sample will be drawn from these two populations. A questionnaire dealing with normative type questions for the role of the supervisors will be developed.

After receiving the answered questionnaires, the data will be analysed in the Planning, Research and Co-ordination Office of the Ministry of Education. Consensus between the groups will be tested by the chi square test and significance at the .05 level will be considered as satisfactory. The analysis may provide information about:

- the role expectation of supervisors for themselves,
- the role expectation of teachers for supervisors,
- role conflicts between the teachers and supervisors,
- the present situation concerning supervisory activities in Turkish secondary schools,
- the types of assistance that teachers expect or receive from the supervisors,
- crucial teaching problems with a priority ranking,
- the types of additional supervisory and in-service help which the teacher needs.

D.3 *Ortaokul ve Lise Problem Tarama Araştırması* (Research into the problems of students in middle schools and lycées in Turkey)

Responsible researchers: H. ERDOĞAN, M. HATİPOĞLU

Number of research workers engaged in project: 6

Starting date: April 1970

Probable completion date: June 1971

Purpose: (a) to discover the problems of students in middle schools and lycées, (b) to explore whether these problems differ according to geographical area, sex and age, and (c) to publish the results of the research in a booklet which may be helpful to guidance personnel in schools.

Procedure: In order to develop two problem check lists, one for middle schools, the other for lycées, information was gathered from the schools in the city of Ankara. For this purpose, nine middle schools and nine lycées were selected, and an assay questionnaire was used. About 600 questionnaires from each group were collected, coded and processed. As a result, two problem check lists were developed. The problem check lists will be given to a nation-wide sample group. Collected data will then be processed.

II. *Name of organisation:* ORTA-DOĞU TEKNİK ÜNİVERSİTESİ, FEN ve EDEBİYAT FAKÜLTESİ, EĞİTİM BÖLÜMÜ
(Department of Education, Middle East Technical University, Faculty of Arts and Sciences)

Address: Ankara

Director: Associate Professor Dr. A. Kemal Özinönü,
Head, Department of Education

A. HISTORICAL

1. Year of foundation: 1959.

2. The need to bring professional education up to date by way of teacher training and to tackle educational problems by establishing education as a discipline of study at university level led to the Department being set up.

3. The Department was established by the Turkish Ministry of Education and the United Nations.

B. STATUS AND PROGRAMME

1. The Department of Education is a department within the Faculty of Arts and Sciences.

2. There is no directing board.

3. The Department contains the following sections:

- teacher education,
- science education, scientific manpower
- psychometry.

4. Staff in 1970

	Full-time	Part-time
Total (staff members)	5	-
Researchers	4	-

5. Total budget of the Department

1968	350,000 TL.
1969	450,000 TL.
1970	550,000 TL.

These are approximate figures, the Department's budget being combined with that of the Faculty of Arts and Sciences. Current expenditure is covered by the University; a large part of research funds is provided by the Scientific and Technical Research Council of Turkey in support of individual or team research projects.

6. One of the major functions of the Department, besides research, is the initial training of teachers.

7. The Department provides both credit and non-credit seminars for prospective research workers.

8. The aims of research activities of the Department briefly are:

- to assess present and past stock of scientific manpower and publications so as to shed light on the formulation of Turkish science policy and graduate education in Turkey,
- to develop the school science curriculum in the light of recent curriculum movement,
- to find ways of improving measuring tools used in the evaluation of education.

Main fields of research:

- science policy, scientific development (including the brain drain), graduate education,
- curriculum and teaching strategy,
- educational psychology.

Major methodologies of research:

- statistical analyses including sampling, inferential statistics (test of significance, analysis of variance, etc),
- questionnaire techniques,
- experimental and empirical methods in curriculum improvement,
- comparisons based on descriptive statistics processes.

C. MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

C.1 *Türkiye'de Temel Bilimlerde 33 yıllık gelişme 1933-66* (Growth in Turkish positive basic sciences 1933-66)

Responsible researcher: A.K. ÖZİNÖNÜ

Number of research workers engaged in project: 4

Time spent on project: 3 years

Purpose: To collect reliable data on the development of Turkish basic scientists and their publications between 1933 and 1966, and to evaluate analytically where Turkey stands in her scientific development as compared to other nations, and thus to shed light on the formulation of Turkish science policy about basic science and graduate education.

Procedure: Data, collected by questionnaires and interviews with scientists, were put on IBM cards. Frequency and cumulative frequency distributions of numbers of scientists and their publications were obtained for the past 33 years. The test of significance was employed to check sample sizes. Ogive curves were tested for goodness of fit to Derek J. De Solla Price's* exponential curve of scientific development.

Conclusions: It was found that, at her present state of scientific manpower development, Turkey

- is still under strong impact of foreign scientists and scientific personnel, since the great majority of young PhDs are trained and advised by professors of foreign nationality serving in Turkey;
- is far from possessing an exponential development as seen in the developed countries;
- has 420 doctors of science but should add 42 new scientists (PhDs) to her stock in 1966, 47 in 1967, and 75 in 1972 in order to arrive at an exponential development;
- has developed an average of 8 doctors of science per annum during the 1933-39 period and 17 doctors of science in the 1952-66 period;
- produces professors of science in 17 years after the PhD, compared to 8-9 years in the USA;
- produced her first locally trained doctors of science around 1940. Despite the fact that both Turkey and Japan began their attempts at scientific development at about the same time, Japan produced her first locally trained doctors of science as early as 1888.

Bibliographical references:

Zahlan, A.B. and Nader, Claire (eds): *Science and Technology in Developing Countries.* "Pattern of Scientific Development in Turkey." London, Cambridge University Press, 1969.

Middle East Technical University, Faculty of Arts and Sciences: *Growth in Turkish Positive Basic Sciences.* Pub. No. 17, Ankara, Güzel Istanbul Matbaası, 1970.

---

*Price, Derek J. De Solla, *Science Since Babylon,* New Haven, Yale University Press, 1961, p.116.

C.2 *Şans Başarısının Test Puvanlarına Etkisi ve Şans Başarısını Azaltan Bir Madde Tipi* (The effect of guessing on test scores and an item format minimising this effect)

Researcher: M. TURGUT

Time spent on project: About 2 years (May 1968 - February 1970)

Purpose: A detailed and critical study of the effect of guessing on test scores; an analysis of correction formulae for guessing; to compare a special item format with the conventional multiple-choice format in reduction of guessing effect, reliability, and validity.

Procedure: The models of "correction for guessing" are examined critically. A multi-response type of multiple-choice vocabulary test is developed. It is compared experimentally with its conventional (single response) format.

Conclusions: (a) The correction formulae for guessing are all based on untenable assumptions. They either over-correct or under-correct the test scores in most practical situations. (b) The most effective way of reducing the guessing error in test scores is to increase the number of alternatives per item, rather than to increase the number of items in a test. (c) The special item format used in this research is found to be: (1) less susceptible to guessing, (2) more reliable, (3) more difficult but more valid.

C.3 *Yurt dışında çalışan Doktoralı Türkler: Türkiye'den başka ülkelere yüksek seviyede eleman göçü üzerinde bir araştırma* (Turkish PhDs working abroad: A study of the emigration of highly qualified manpower from Turkey)

Researcher: T. OĞUZKAN

Time spent on project: 2 years (January 1968 - January 1970)

Purpose: To find out the extent and the nature of PhD emigration from Turkey; to assess the outstanding factors related to such an emigration.

Procedure: Analysis of the result of a questionnaire sent to Turkish PhDs working abroad at the time of the study.

Conclusions: The most outstanding reasons for the emigration of PhDs from Turkey are linked to professional aspirations and working conditions.

D. MAJOR RESEARCH PROJECT IN PROGRESS

Ortaokul Fen Müfredatı Geliştirme Projesi (Developing an integrated science curriculum as teaching and resource units for junior high schools)

Responsible researcher: A.K. ÖZİNÖNÜ

Number of research workers engaged in project: 9

Starting date: October 1969

Probable completion date: October 1972

Purpose: To develop a unified science curriculum for junior high schools in the light of recent scientific developments.

Procedure: Empirical curriculum development.

III. *Name of organisation:* HACETTEPE ÜNİVERSİTESİ, SOSYAL ve İDARÎ BİLİMLER FAKÜLTESİ, SOSYAL BİLİMLER ENSTİTÜSÜ, EĞİTİM BÖLÜMÜ
(Department of Education, Institute of Social Sciences, Faculty of Social and Administrative Sciences, Hacettepe University)

Address: Ankara

Director: Associate Professor Selahattin Ertürk, EdD

A. HISTORICAL

1. Year of foundation: 1966.

2. The Department of Education was established to meet the need for an organisation (a) to issue teaching certificates to qualified graduates of the University, (b) to train professional educators in the areas needed by State departments, other universities, and other higher training institutions, (c) to carry out research in the area of education, and (d) to develop needed measurement devices.

3. The Department was founded on the initiative of Professor Dr. İhsan Doğramacı, President of the University.

B. STATUS AND PROGRAMME

1. The Department of Education is a part of the Institute of Social Sciences which is, also, a part of the Faculty of Social and Administrative Sciences, Hacettepe University.

2. The Department has an advisory board. The board consists of three associate professors of education, seven full-time instructors, two part-time instructors, and two assistants.

3. Three different programmes exist in the Department. They are (a) programme in educational administration, (b) programme in curriculum development and evaluation, and (c) programme in counselling and guidance.

4. Staff in 1970

	Full-time	Part-time
Total	14	-

5. The Department does not have its individual budget. It is financed by the University as required.

6. The Department participates in the initial training of teachers by issuing teaching certificates to the students of other departments of the University and of other universities, and in the further training of teachers, both by carrying out advanced courses in education for practising teachers and by issuing the degrees of MA and EdD to the qualified educators.

7. At present, the Department does not train educational researchers per se, but it does issue advanced degrees to the qualified individuals who may undertake research activities as well as those of teaching, administering, or counselling.

8. Research projects undertaken, and to be carried out, and doctoral theses are so planned as to provide the necessary scientific information required to carry out the present programmes covered by the Department.

C. MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

On Yıl Öncesine Kıyasla Öğretmen Davranışları (A comparative study of teachers' behaviour in 1960 and in 1970)

Responsible researcher: S. ERTÜRK

Number of research workers engaged in project: 10

Time spent on project: 6 months

Purpose: The purpose of this study is to compare the most common inefficiencies and undesirable behaviour patterns in the present professional practices of the public high school teachers of Turkey with those of 1960 as bases for teacher training activities.

Procedure:

(a) Discovering the inefficiencies and undesirable behaviour patterns:

A set of criteria was obtained (by way of revalidating a set of criteria which was constructed by the same investigator in 1960). Present critical behaviour of the teachers was discovered though their responses to a questionnaire (which was obtained by way of revalidating a questionnaire that was constructed in 1960) and the data about 1960 were taken from the report of the earlier research. Present teacher activities were evaluated in terms of the set of criteria, and the results of evaluation of the teacher practices in 1960 were taken from the report of the earlier research. Thus inefficiencies and undesirable behaviour (in 1960 and in 1970) were pointed out.

(b) Discovering the change that occurred from 1960 to 1970:

The degrees of commonness of the inefficiencies and undesirable behaviour patterns in 1960 were compared with those in 1970; and in cases where differences were observed the directions were noticed and the levels of significance were calculated. The tendencies of changes were discovered in terms of basic principles and fundamental concepts.

(c) Verifying the validity of results for sub-groups of teachers:

Differences in the degrees of commonness of inefficiencies and undesirable behaviour patterns in 64 sub-groups were determined and the levels of significance for the differences were calculated. The general patterns of the distribution of the inefficiencies and undesirable behaviour patterns in the whole group and the 64 sub-groups were compared.

Conclusions: Generally significant increases in the number of inefficiencies and in the degree of commonness of the undesirable behaviour patterns were observed. It was also found that none of the sub-groups deviated from the general pattern.

Depite the fact that the educational leader's opinion in 1970 did not differ from that of 1960, the teacher's behaviour did, in the undesired direction. This can be taken as an indication of the fact that the methods used in teacher training in the last ten years have been ineffective or insufficient.

The teacher himself is not the sole factor in determining teacher behaviour. The interaction complex that produces teacher behaviour includes other factors less resistant to change. A reform aiming at changing such factors will therefore be more appropriate than an action dealing directly with the factor most resistant to change.

As a part of reformed action in education, emphasis should switch to programme development activities in which the basic question will be "What activities should the student undertake?" instead of "What should the teacher do?" This change may result in an indirect, yet more effective, teacher improvement and, in a better teacher behaviour pattern, which is dependent less on the teacher's behavioural history and more on the guiding equipment and sources prepared by the behavioural engineers.

Bibliographical reference:

Ertürk, S. *On Yıl Öncesine Kıyasla Öğretmen Davranışları*, Ankara, Millî Eğitim Bakanlığı Planlama-Araştırma ve Koordinasyon Dairesi, 1970.

IV. *Name of organisation:* MİLLÎ EĞİTİM BAKANLIĞI, MESLEKÎ ve TEKNİK ÖĞRETİM, ETÜD ve PROGRAMLAMA DAİRESİ BAŞKANLIĞI (Ministry of Education, Under-secretariat of Vocational and Technical Education, Study and Programming Office)

Address: Ankara

Director: Dr. Hıfzı Doğan

A. HISTORICAL

1. Year of foundation: 1962.

2. The Study and Programming Office was set up to collect periodically statistical data about vocational and technical education, and to improve curricula of vocational and technical schools by working closely with industry on those manpower skills and abilities needed by industry, including shop planning and layout.

3. The Office was founded on the initiative of the Under-secretary of Vocational and Technical Education.

B. STATUS AND PROGRAMME

1. The Office is a part of the Under-secretariat of Vocational and Technical Education.

2. The Office works with a series of advisory committees including: (a) a national advisory committee of 15-20 persons representing industry, labour, management, universities and various government departments, and (b) regional and local advisory committees constructed on the same pattern.

3. The Office has the following sections:

- Industrial Survey Section,
- Curriculum Development Section,
- Shop Layout and Planning Section,
- Statistical Section,
- Vocational Guidance Section.

4. Staff in 1970

	Full-time	Part-time
Total staff members	19	15
Total researchers	4	-

5. The budget of the Office is included in the budget of the Under-secretariat. The predominant source of finance is the national budget.

6. Teacher training: for some special objectives, summer seminars are held.

7. Training of educational research workers: for this purpose, summer seminars are held. Some staff members take graduate study at local universities.

8. The main purpose of the research efforts of this Office is to survey and identify the needs of business and industry so as to gear instruction in vocational and technical schools more closely to these needs.

C. MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

C.1 *Makina ve Elektrik Teknisyenlerinin Yetiştirilmesi İle İlgili Araştırma* (Survey of training needs of mechanical and electrical technicians)

Responsible researcher: T. HAYDAR

Number of research workers engaged in project: 63

Time spent on project: 9 months

Purpose: To get information about (a) products, materials, tools and equipment; (b) what kind of jobs the technician performs in his work; (c) what kind of knowledge he uses while he does his job, and (d) suggest necessary changes in the curriculum according to the results.

Procedure: Three different kinds of questionnaire forms were used in this survey through interviews. The survey was made in 14 provinces. It covered 100 industrial plants, 400 electrical and mechanical technicians, 200 supervisors of technicians, and 100 personnel directors in the industrial plants.

Conclusions: The main findings were that instruction in human relations, industrial organisation and quality control would be appropriate additions to existing curricula.

Bibliographical reference:

Makina ve Elektrik Teknisyenlerinin Yetiştirilmesi İle İlgili Araştırma Raporu, Yayın No. 11, Ankara, Millî Eğitim Bakanlığı Mesleki ve Teknik Öğretim Etüd ver programlama Dairesi Başkanlığı, Nisan 1970.

C.2 *İnşaat Teknisyenlerinin Yetistirilmesi İle İlgili Araştırma* (Research on training of construction technicians)

Responsible researcher: T. HAYDAR

Number of research workers engaged in project: 24

Time spent on project: 5 months

Purpose: To get information about (a) products, materials, tools and equipment; (b) what kind of jobs the technician performs in his work; (c) what kind of knowledge he uses while he does his job, and (d) suggest necessary changes in the curriculum according to the results.

Procedure: Two different kinds of questionnaire forms were used in this survey conducted through interviews. The survey was made in Istanbul, Ankara, İzmir and Adana provinces. The survey covered 30 construction firms and government offices, 100 construction technicians and 30 engineers and architects.

Conclusions: The main findings were that instruction needs to be based on materials and procedures now actually being used in construction work, and emphasis needs to be placed less on theoretical treatments and more on practical application to total operations.

Bibliographical reference:

İnşaat Teknisyenlerinin Yetiştirilmesi İle İlgili Araştırma Raporu, Yayın No. 17, Ankara, Millî Eğitim Bakanlığı, Mesleki ve Teknik Öğretim Etüd ve Planlama Dairesi Başkanlığı, Aralık 1969.

C.3 *İzmir Motor Tekniker Okulu Mezunlarını Takip Araştırması* (Follow-up study of Izmir Motor Technician School graduates)

Responsible researcher: T. HAYDAR

Number of research workers engaged in project: 8

Time spent on project: 5 months

Purpose: To conduct a follow-up study of graduates and to collect data about their success in industry.

Procedure: From 446 graduates of the school over a fifteen year period (1954-68), 220 usable questionnaires were analysed. The questionnaires asked for information concerning job experiences, salaries, job satisfaction, and the value of educational preparation.

Conclusions: Graduates were able to find their first jobs within one month, employers usually seeking their services at the time of graduation. Average beginning salaries were 1100 TL. Military service and further education were the two main reasons for interrupting employment. Job satisfaction was high and so was satisfaction with training in the school. The main curriculum improvement needs were for better vocational guidance and increased emphasis on principles of management and supervision.

Bibliographical reference:

İzmir Motor Tekniker Okulu Mezunlarını Takip Araştırması Raporu, Yayın No. 38, Ankara, Millî Eğitim Bakanlığı Mesleki ve Teknik Öğretim Etüd ve programlama Dairesi Başkanlığı, Haziran 1970.

C.3 *Plâstik Endüstrisinde Çalışacak Teknisyen ve Vasıflı İşçilerin yetiştirilmesi ile ilgili araştırma* (A research project concerning the training of technicians and skilled workers for the plastics industry)

Responsible researcher: T. HAYDAR

Number of research workers engaged in project: 7

Time spent on project: 3 months

Purpose: To make an initial survey of the plastics industry in Turkey so as to develop a curriculum for technical training in this field.

Procedure: 30 firms in Istanbul, Ankara and İzmir were surveyed by interview to find out their products, equipment, procedures and possible teaching personnel.

Conclusions: Information gathered from the interviews was tabulated and will be used by a curriculum development committee to plan new programmes for technical training. All the plastics firms interviewed recognised the need for technical training in this area.

Bibliographical reference:

Plâstik Endüstrisinde vasıflı işçi ve teknisyen olarak çalışacak elemanların yetiştirilmesi ile ilgili araştırma raporu, Yayın No.16, Ankara, Millî Eğitim Bakanlığı Mesleki ve Teknik Öğretim Etüd ve Planlama Dairesi Başkanlığı, Ekim 1969.

C.4 *Gezici Köy Kursları hakkında Araştırma* (A research project on travelling village courses)

Responsible researcher: T. HAYDAR

Number of research workers engaged in project: 14

Time spent on project: 4 months

Purpose: To analyse reasons why travelling village courses had become less effective.

Procedure: 100 specially selected experienced village instructors answered questionnaires evaluating travelling village courses.

Conclusions: Travelling village courses were effective prior to Turkey's rapid modernisation after 1960, but since 1960 the simple basic skills taught in these courses no longer meet Turkey's needs. Workers want to move from the villages to the larger cities and need more advanced skills. Modernisation is spreading to the villages, and simple skills no longer suffice for modern construction, modern electrical equipment, and modern machinery. Also workers are seeking opportunities to travel abroad for work and training in Germany and other European nations. The teachers surveyed recommended that travelling courses be located permanently in larger villages where electrical power and adequate workshops could be established.

C.5 *Türk Kadın Standart Beden Ölçülerini Tesbit Çalışmaları - 2-15 yaş grubu ölçüleri* (A survey to determine standard body sizes of Turkish girls aged 2 to 15 years)

Responsible researcher: A.T. DURSUNOĞLU

Number of research workers engaged in project: 43

Time spent on project: 13 months

Purpose: To determine standard body sizes of Turkish girls aged 2 to 15 years.

Procedure: Following a pilot study involving a small sample of students from schools in Ankara province, a larger sample of students drawn from ten provinces were studied and the results of both studies compared.

Conclusions: The published results list all the measurements for each standard size.

Bibliographical reference:

Türk Kadın Standart Beden Ölçülerini Tesbit Çalışmaları, 2-15 yaş grubu ölçüleri, Etüd ve Programlama Dairesi Yayınları No. 14, Ankara, MEB Mesleki ve Teknik Öğretim Müsteşarlığı Etüd ve Programlama Dairesi Başkanlığı, Ağustos 1970.

V. *Name of organisation:* DEVLET PLANLAMA TEŞKİLÂTI
(State Planning Organisation)

Address: Bakanlıklar, Ankara

Director: Turgut Özal, Under-secretary

C. MAJOR RESEARCH PROJECT REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

Cost structure of Turkish higher education (Or. Engl.)

Responsible researchers: K. EIDE, P. KİŞMİR, M. SOY

Number of research workers engaged in project: 4

Time spent on project: 6 months

Purpose: To study the cost structure of Turkish higher education.

Procedure: Study of resources and application of equations and variables.

Conclusions: Unit costs and cost/institute, and cost/student according to fields of study and institution were calculated.

Bibliographical reference:

Eide, K. *The Cost Structure of Turkish Higher Education*, Pub. No. SPO 822 - SPD 189 (State Planning Organisation Publication), October 1969.

VI. *Name of organisation:* TÜRKİYE BİLİMSEL ve TEKNİK ARAŞTIRMA KURUMU (The Scientific and Technical Research Council of Turkey)

Address: Bayındır Sokak No. 33 Yenişehir-Ankara

Director: Dr. S. Çetin Özoğlu, executive secretary and member of the Committee for Training Young Scientists

C. MAJOR RESEARCH PROJECTS REPORTED IN THE ACADEMIC YEARS 1968-69 AND 1969-70

C.1 *Yurt dışında çalışan Doktoralı Türkler: Türkiye'den başka ülkelere yüksek seviyede eleman göçü üzerinde bir araştırma* (Turkish PhDs working abroad: A study of the emigration of highly qualified manpower from Turkey)

This project is reported under C.3 of the Department of Education, Middle East Technical University, Faculty of Arts and Sciences (page 252).

C.2 *Lise I ve Lise II Sınıfları İçin Fen Kabiliyet Testi Hazırlama ve Geliştirme* (The preparation and development of a science ability test for the first and second grades of lycées)

Responsible researcher: S.Ç. ÖZOĞLU

Number of research workers engaged in project: 2

Time spent on project: 6 months

Purpose: To improve the previous science ability test for selecting talented students in lycées for the Council's projects.

Procedure: Trial and selection of items according to the psychometric criteria.

Conclusions: As a conclusion two forms of test were prepared.

D. MAJOR RESEARCH PROJECTS IN PROGRESS

D.1 *Memeleketimizde Pozitif Bilimlerin Temel ve Uygulamalı Dallarında Lisans Üstü Eğitimin İncelenmesi* (A study of graduate education in exact sciences - basic and applied branches - in Turkey)

Responsible researcher: F. VARIŞ

Number of research workers engaged in project: 8

Starting date: March 1970

Probable completion date: March 1971

Purpose: A detailed study of graduate programmes and material, of scientific and administrative conditions of education is needed in order to propose basic principles for future graduate programmes as they are planned.

Procedure: Survey methods; questionnaires.

D.2 *Fizik Öğrenimini Geliştirmek İçin Berkeley Fizik Programını Türkçeye Adapte Edip Deneme Projesi* (An experimental project for adapting the Berkeley physics programme to Turkish conditions in order to improve physics education)

Responsible researcher: R. NASUHOĞLU

Number of research workers engaged in project: 6

Starting date: October 1969

Probable completion date: October 1972

Purpose: To improve undergraduate physics education in Ankara University, Science Faculty.

Procedure: Survey methods.

D.3 *Fen Lisesi Tarafından Uygulanıp Geliştirilmiş Fen Öğretimi Programlarının Diğer Türk Liselerinde Uygulanması İmkânları Üzerinde Araştırmalar* (The project for the improvement of science education in Turkish lycées)

Responsible researchers: Z. BALOĞLU, S. SOYKAL

Number of research workers engaged in project: A very comprehensive project supported by the Ministry of Education, the State Planning Organisation, the Ford Foundation and TBTAK (The Council)

Starting date: September 1968

Probable completion date: 1971

Purpose: To seek possibilities for implementing the science education programme applied and developed by the Science Lycée (in Ankara) in other Turkish lycées, and so to adapt modern curriculum materials for use in Turkish lycées and to educate the teachers in the use of these materials.

Procedure: Independent study, laboratory investigations, lectures, seminars, discussion groups.